SUBDIVISION REGULATIONS

Updated through February, 1998

BOOK # _____

CITY OF MILLINGTON SUBDIVISION REGULATIONS

UPDATED THROUGH FEBRUARY, 1998

City of Millington

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MUNICIPAL PLANNING COMMISSION

CITY OF MILLINGTON, TENNESSEE

ARTICLE I GENERAL PROVISIONS

A. Purpose

Land subdivision is the first step in the process of community development. Once land has been cut up into streets, lots and blocks and publicly recorded, the correction of defects is costly and difficult. Subdivision of land sooner or later becomes a public responsibility, in that roads and streets must be maintained and various public services customary to urban areas must be provided. The welfare of the entire community is thereby affected in many important respects. It is therefore to the interest of the public, the developer and future owners that subdivision be conceived, designed and developed in accordance with sound rules and proper minimum standards.

The following subdivision standards guiding the Planning Commission are designed to secure a coordinated layout with adequate provisions for traffic, light, air, recreation, transportation, water, drainage, sewer, and other sanitary facilities and services; to promote a distribution of population and traffic which will tend to create conditions favorable to health, safety, convenience and prosperity.

The following regulations set forth the minimum standards to be adhered to by developers of lands for residential, commercial, and industrial uses, and to provide a guide for the Planning Commission and other city officials exercising their duties pertaining to the review, approval and administration of land subdivision development with the jurisdiction of the City of Millington.

B. Authority

These Subdivision Regulations and the procedures and standards set forth herein are adopted by the Planning Commission under the authority granted by Tennessee Code Annotated, Section 13-4-301 through 13-4-309. The Planning Commission has fulfilled the requirements set forth in these statutes as prerequisites to the adoption of such standards, having filed a certified copy of the Major Street Plan the Office of the Register of Shelby County, Tennessee.

C. Jurisdiction

These regulations shall govern all subdivision of land within the corporate limits of Millington, Tennessee. Within these regulations the term "subdivision" shall mean the division of a tract or parcel of land into two (2) or more lots, sites, or other divisions requiring new street or utility construction, or any division of less than five (5) acres for the purpose, whether immediate or future, of sale or building development and includes resubdivision and when appropriate to the context, relates to the process of resubdividing or to the land or area subdivided.

Any owner of land within this area wishing to subdivide land shall submit to the Millington Planning Commission a plat of the subdivision according to the procedures outlined in Article II, which plat shall conform to the minimum requirements as set forth in Article III.

Improvements shall be installed as required by Article IV of these regulations

D. Policy

It shall be the policy of the Planning Commission to encourage subdivision development which enhances the health, safety, and welfare of the community and which optimize the use of the land while providing a prudent balance between the economic considerations of the developer and the public interest. Conversely, it shall be the policy of the Planning Commission to disapprove proposed subdivision development which is deemed to be inefficient use of land, inconsistent with the needs and character of the community, economically untimely, or otherwise not in the public interest. Further, it shall be the policy of the Planning Commission to consider each proposed subdivision development on its merits in context with

existing or planned land use, population and traffic distribution, and the needs and best interest of the community; consequently, the mere compliance with minimum standards set forth in these regulations does not grant to the developer an implicit or explicit right to subdivision approval; accordingly, the Planning Commission may require that a proposed subdivision development exceed the minimum standards to satisfy site peculiar conditions or to conform to the existing neighborhood.

E. Technical Specifications Included As Part of the Regulations

The "Local Government Public Works Standards and Specifications" by the Municipal Technical Advisory Service of the University of Tennessee as amended as set forth in the Appendix is hereby adopted as the Technical Specifications of the City of Millington.

F. Basic Definitions and Interpretations

Except as specifically defined herein all words used in these regulations shall have their customary dictionary definitions where not inconsistent with the context.

For the purposes of these regulations and in order to carry out the provisions and intentions as set forth herein certain words, terms and phrases are to be used and interpreted as defined hereinafter. Words used in the present tense include the future tenses; words in the singular number include the plural; and words in the plural number include the singular; the word "person" includes a firm, partnership, or corporation as well as an individual; the word "lot" includes the word "plot" or "parcel"; the word "building" includes the word "structure"; and the terms "shall" and "will" are always mandatory and not directory; and the word "may" is permissive.

The following words, terms and phrases are hereby defined as follows and shall be interpreted as such throughout these regulations.

Arterial. Major Highways.

Block. A tract of land bounded by streets, or by a combination of streets and public parks, cemeteries, railroad rights-of-way, shorelines of waterways, or boundary lines of municipalities.

Bond. Any form of security including a cash deposit, surety bond, collateral, property, or instrument of credit in an amount and form satisfactory to the Planning Commission. All bonds shall be approved by the Planning Commission whenever a bond is required by these regulations.

Building. Any structure built for the support, shelter, or enclosure of persons, animals, or movable property of any kind and includes any structure.

Building Setback Line. A line in the interior of a lot which is generally parallel to and a specified distance from, the street right-of-way line or lines; which creates a space between such lines in which no building shall be placed.

Buildable Area of a Lot. That portion of a lot bounded by the required rear and side yards and the building setback line.

Collector. Streets that carry traffic from local streets to the major system of arterial streets.

Cul-de-sac. Permanent dead-end streets with a turn-around provided at the dead-end.

Dedication. The setting aside of land/or improvements for a particular use.

Design Plat. A map of a proposed subdivision showing the lot sizes and layout, location and sizes of streets and used as an aid in discussing the design of the proposed subdivision.

Developer. An individual, partnership, corporation, or other legal entity or agent thereof which undertakes the activities covered by these regulations. In as much as the subdivision plan drawings are merely a necessary means to the end of assuring satisfactory development, the term "developer" includes "subdivider", "owner" or "builder" even though the persons and their precise interests may vary at different project stages.

Easement. The right to use another person's property but only for a limited and specifically named purpose, the owner generally continues to

make use of such land since he has given up only certain and not all, ownership rights.

Easement, Access, Travel. The right granted by the owner of land to another party by deed or prescription, to allow access across one parcel of land to another. For the purpose of these regulations any easement created for this purpose shall have a minimum width of fifty (50) feet, serve as access to only one lot and be permanently recorded in perpetuity. An easement serving more than one lot shall be considered a private street.

Easement Area. A strip of land over, under, or through which an easement has been granted.

Easement, Utility. The right granted by the owner of land to allow facilities to be constructed, maintained or preserved. Utility easements shall include but is not limited to easements for storm drainage, water lines, sewer lines, electric power lines, and pipe lines.

Engineer. A qualified Civil Engineer registered and currently licensed to practice engineering in the State of Tennessee.

Engineering Plat. A map of the proposed subdivision including engineering design drawings of streets, drainage and utilities.

Final Plat. The map or plan or record of a subdivision and any accompanying material as described in these regulations.

Floodplain. An area of a river or stream, together with appropriate adjacent land, established to insure adequate and safe drainage.

Frontage. That side of a lot abutting on a street and ordinarily regarded as the front of the lot.

Grade. The slope of a road, street, or other pubic way, specified in percentage (%) terms.

Health Department. Shelby County Health Department.

Highway Department. Shelby County Highway Department.

Improvements. Physical changes made to raw land and structures on or under the land surface in order to make the land more usable for man's activities. Typical improvements in these regulations would include but not be limited to grading, street pavement, curbs, gutters, drainage ditches, storm and sanitary sewers, street name signs and street trees.

Individual Sewage Treatment Facility. A sewage disposal system developed to function on an individual lot basis. A septic tank is a type of individual sewage treatment facility.

Local Streets. Streets that provide access to property abutting the public right-of-way. (Also known as minor streets).

Lot. A parcel of land which is or may be occupied by a building and its accessory building or use customarily incidental thereto, together with such yards or open spaces within the lot lines as may be required by these regulations.

Lot Corner. A lot of which at least two (2) adjoining sides abut on a street, provided that the interior angle at the intersection of two such sides is less than one-hundred thirty-five (135) degrees.

Lot Area. The total horizontal area included within lot lines.

Lot Depth. The average distance from the street line of the lot to its rear line measured in the general direction of the side lines of the lot.

Lot Frontage. The dimension of a lot or portion of a lot abutting on a street excluding the side dimension of a corner lot.

Lot Lines. The lines bounding a lot as defined herein.

Lot Number. the official number assigned to a lot for identification purposes.

Lot Width. The width of a lot at the building setback line measured at right angles to its depth.

Major Street Plan. The official plan adopted by the Millington Municipal Planning Commission designating types and locations of streets within the corporate limits.

Monuments. Markers placed on or in the land.

Percolation Test. An examination of subsoil used in determining the acceptability of the site and the design of the subsurface disposal system.

Planning Commission. The Municipal Planning Commission of Millington, Tennessee.

Private Streets. A street which has not been dedicated to the public use, and to which the general public is denied access.

Protective Covenants. Contracts between the land subdivider and lot purchaser expressing agreement covering use of the land.

Public Sewer System. A central sewer system, owned operated and maintained by the City of Millington.

Public Hearing. A meeting for the review of a matter where opinions may be presented by the public. These hearings may take place during the regular Planning Commission meetings and are held according to State laws.

Public Street. A street dedicated to the public use and open to the public access.

Public Uses. Public parks, schools and administrative, cultural and service buildings, not including public land or buildings devoted solely to storage and maintenance of equipment and material.

Public Utility. Any person, firm, corporation, municipal department or board duly authorized to furnish under state or municipal regulations to the public electricity, gas, steam, communications, telegraph, transportation, water, or sewer.

Recreational Facilities. Country clubs, riding stables, golf courses and their similar recreational areas and facilities including swimming pools.

Register of Deeds. Shelby County Register of Deeds.

Reserve Strip. A portion of land set aside to prevent and prohibit access to adjoining property or public thoroughfare.

Resubdivision. A change in a map of an approved or recorded subdivision plat if such change affects any street layout on such map or area reserved thereon for public use, or any lot line; or if it affects any map or plan legally recorded prior to the adoption of any regulations controlling subdivision.

Right-of-way. A dedication of land to be used generally for streets, alleys, or other public uses wherein the owner gives up all his rights to the property as long as it is being used for the dedicated purpose. Also, a land measurement term meaning the distance between lot property lines which generally contain not only the street pavement but also the sidewalks, grass area and utilities.

Road. For the purpose of these regulations, "road" shall be defined the same as "street".

Roadway. The portion of the street right-of-way which contained the street pavement, curb, and gutter and is used primarily as a channel for vehicular movement and secondarily as a drainage channel for storm water. In these regulations the pavement is measured from face to face of the curbs.

Sanitary Sewer System. A public or community sewage disposal system of a type approved by the State Department of Public Health.

Secretary. The person designated by the Planning Commission as its secretary.

Septic Tank. See Individual Sewage Treatment Facility.

Setback. The distance required to obtain the minimum front, side and rear yards.

Street. A general term used to describe a right-of-way which provides a channel for vehicular and pedestrian movement between certain points in the community, which may provide for vehicular and pedestrian access to properties adjacent to it, and which may also provide space for the location of underground and above ground utilities.

Street, Half. A street having width less than required by these and other appropriate regulations.

Street, Intersecting. Any street which joins another street at an angle, whether or not it crosses the other.

Street Classification. Types of streets as set forth in the Major Street Plan.

Street Furniture. Any improvements placed within the street right-of-way, such as utility poles, street signs, etc.

Street Grade. The officially established grade of the street upon which a lot fronts. If there is no officially established grade, the existing grade of the street at the mid-point of the lot shall be taken as the street grade.

Street Line. The legal line between street right-of-way and abutting property.

Street Sign. The sign designating the official name of the street.

Subdivision. The division of a tract or parcel of land into two (2) or more lots, sites, or other divisions requiring new street or utility construction, or any division of less than five (5) acres for the purpose, whether immediate or future, of sale or building development, and includes resubdivision and when appropriate to the context relates to the process of resubdividing or to the land or area subdivided.

Surveyor. A qualified surveyor registered and currently licensed to practice surveying in the State of Tennessee.

Test Holes. Openings dug, boarded, or drilled in the ground for conducting soil tests.

Unit. A subsection of a total subdivision developed as a complete segment.

Use. The specific purpose for which land or a building is designed, arrange, intended, or for which it is or may be occupied or maintained. The term "permitted use" or its equivalent shall not be deemed to include any non-conforming use.

Way. A street or alley or other thoroughfare or easement permanently established for passage of persons or vehicles.

Yard, Front. An open unoccupied space on the same lot with a main building, extending the full width of the lot and situated between the street line and the front line of the building projected to the side lines of the lot. The depth of the front yard shall be measured between the front line (extended) of the building and the street line.

Yard, Rear. An open (other than for permitted accessory structures) space on the same lot with the principal building between the rear line of the building and the rear line of the lot and extending the full width of the lot.

Yard, Side. An open unoccupied space on the same lot with the building, situated between the building and the side line of the lot and extending from the front yard to the rear yard. Any lot line not a rear line or a front line shall be deemed a side line.

Zoning Ordinance. The duly adopted Zoning Ordinance of Millington, Tennessee

ARTICLE II PROCEDURE FOR SUBDIVISION APPROVAL

A. General

The subdivider shall consult early and informally with the Planning Commission and its technical staff for advice and assistance before the preparation of the Design Plat and its formal application for approval. This will enable him to become thoroughly familiar with these regulations, the Major Thoroughfare Plan and other official plans or public improvements which might affect the area. Such informal review should prevent unnecessary and costly revisions.

The procedure for review and approval of subdivisions and its documentation consists of three (3) separate steps. The first formal step is the preparation of a Design Plat submitted to the Planning Commission. The second step is the Engineering Plat which will be reviewed by the city engineer and the subdivision review committee. The third step is the preparation of a Final Subdivision Plat with all the required certificates for submission to the Planning Commission. The Final Plat, once approved by the Planning Commission and signed by the Secretary of the Planning Commission becomes the instrument to be recorded by the Office of the Shelby County Register

B. Application Administration and Fees

Any owner of land lying within the area of the jurisdiction of the Planning Commission wishing to divide such land into two (2) or more lots, sites or divisions for the purpose of either immediate or future sale or building shall make application to the Planning Commission by submitting the required plans and plats of the proposed subdivision along with the application fees. Such plans and plats shall conform to the minimum standards for subdivision design as set forth in Article III of these regulations and such additional site peculiar criteria as may be deemed necessary by the Planning Commission or its technical staff.

1. Official Submission Dates and Deadlines

All plats and plans of subdivisions shall be submitted to the Millington Building Inspection Department no less than thirty (30) days prior to the regularly scheduled Planning Commission meeting. Any plat or plan submitted less than thirty (30) days prior to the regularly scheduled Planning Commission meeting will not be considered until the subsequent meeting.

For the purpose of these regulations, the official submission date of a plat shall be the date of the first regular Planning Commission meeting after the plat was submitted to the Millington Building Inspection Department. The statutory period required for formal approval or disapproval shall not begin to run until that date.

2. Official Submission of revisions to Plats

A plat that is resubmitted to the Planning Commission to be on the agenda of a subsequent Planning Commission shall be accompanied by a letter reporting how revisions requested by the Planning Commission or staff have been resolved.

The resubmitted plat and accompanying letter shall be submitted to the Millington Building Inspection Department no less than fifteen (15) days prior to the regular Planning Commission meeting.

3. Required Submission

Prior to commencing any street improvements, substantial grading, installation of utilities or any horizontal construction the developer shall submit plans to obtain the approval of the indicated agencies as follows:

a. A Design Plat to the Planning Commission in accordance with Section "C" of this Article.

b. An Engineering Plat to the Subdivision Review Committee and the Planning Commission in accordance

with Section "D" of this Article. The Subdivision Review Committee shall include at least:

(1) City Engineer
(2) Public Works
(3) Building Inspection
(4) Fire Department
(5) Planning Staff

The water and sewer plans shall also be approved by the Tennessee Department of Public Health.

Upon approval of the Engineering Plat by the Planning Commission and the execution of a subdivision contract by the City of Millington, the developer may commence construction to the grades and elevations required by the approved engineering Plat. No construction of structures shall commence until after approval has been given the final plat nor shall any building permits be issued.

c. A Final Plat in accordance with Section "E" of this Article.

4. Application Fees

The schedule of subdivision application and review fees required shall be established by the Board of Mayor and Aldermen.

C. Design Plat

The Design Plat is the initial formal plat for a proposed subdivision and shall include the full area of the proposed subdivision though the subdivision may be developed in stages. The purpose of the design plat is to insure the proposed subdivision conforms with the Zoning Ordinance and all related plans and regulations. The developer should consult with the planning staff and review the cities' drainage plan, water and sewer maps and Future Land Use Plan prior to submitting the Design Plat.

1. Submission of the Design Plat

After consultation with the Planning Commission and/or staff, but not less than fifteen (15) days prior to the meeting at which the Planning Commission shall consider the Design Plat, the developer shall submit to the Millington Building Inspection Department of City Hall, 14 copies of the plat drawn to a scale of not less than one inch equals one hundred feet (1" = 100') together with the applicable fee.

2. Contents of the Design Plat

The Design Plat shall meet the minimum standards of design as set forth in Article III and shall give the following information.

a. The proposed subdivision's name and location.

b. The name(s), addresses and phone numbers of the owner or owners and of the designer of the Design Plat.

c. Date, approximate north point and graphic scale.

d. The location of existing property lines, streets, buildings, bridges, right-of-way and easements and drainage ditches.

e. The location dimensions and names of proposed streets, alleys and lots.

f. Present zoning classification both on lot to be subdivided and adjoining land.

g. The area of the smallest, largest and average lot.

h. The acreage of the land to be subdivided.

i. Location map showing the relationship of the subdivision site to the town.

j. In addition to the required information, the following information, though not required, would assist in design review and would help avoid later redesign and engineering expense.

(1) Contours at vertical intervals of not more than two (2) feet.

(2) Location and line size of closest existing water and sewer lines.

3. Planning Commission Review

Within thirty (30) days after submission of the Design Plat, the Planning Commission will review it and indicate its approval, disapproval, or approval subject to modifications. If a plat is disapproved, reasons for such disapproval shall be stated in writing. If approved subject to modifications, the nature of the required modifications will be indicated.

If revisions to the Design Plat are requested by the Planning Commission, the developer shall submit the revised Design Plat to the Planning Commission. The revised plat shall be submitted fifteen (15) days prior to the Planning Commission meeting.

Failure of the Planning Commission to act on the preliminary Design Plat within thirty (30) days will be deemed approval of this Design Plat, provided, however, that the applicant may waive this requirement and consent to the extension of such period.

4. Effect of Approval on Subsequent Plat Submissions

The approval of the Design Plat by the Planning Commission will not constitute acceptance of the Engineering Plat and will not be indicated on the Design Plat.

5. Expiration of Approval

The approval of the Design Plat shall lapse unless a final plat based thereon is submitted within one (1) year from the date of such approval unless an extension of time is applied for and granted by the Planning Commission.

D. ENGINEERING PLAT

The Engineering Plat is a fully engineered design of all or part of the proposed subdivision in sufficient detail for the local and state review agencies to determine compliance with the public works construction standards, state pubic health regulations and other applicable regulations.

1. Submission of Engineering Plat

After the Design Plat has been approved and thirty (30) days prior to the Planning Commission meeting at which it is to be considered the developer shall submit seven (7) copies of the Engineering Plat including all plans and profiles and eight (8) additional copies of the Engineering Plat to the Millington Building Inspection Department which are drawn to a scale of not less than one inch equals one hundred feet (1" = 100').

2. Conformance with the Design Plat

If in the process of completing the Engineering Plat, it becomes necessary to redesign the subdivision, a revised design plat will have to be submitted to the Planning Commission for their review.

3. Contents of Engineering Plat

The Engineering Plat shall, at least, meet the minimum design standards in Article III, meet the construction standards included herein and as a supplement and conform substantially to the design plat.

a. The engineering plat shall contain the following information even when subdivision is to be developed in phases or sections.

(1) The proposed subdivision's name and location, the names(s) and address(es) and phone numbers of the owner or owners, and the name, address and phone number of the designer of the plat who shall be an engineer.

(2) Date, approximate north point and graphic scale.

(3) The location of existing and platted property lines, existing streets, buildings, water courses, sewers, bridges, culverts, drain pipes, water mains and any public utility easements, or lines, the present zoning classification, both on the land to be subdivided and on the adjoining land; and the names of adjoining property owners or subdivisions.

(4) The proposed street names and the locations and dimensions of proposed streets, alleys, easements, parks and other open spaces, reservations, lot lines, building setback lines and utilities.

(5) Contours at vertical intervals of not more than two (2) feet except when specifically not required by the Planning Commission. All new developments greater than 50 lots or 5 acres, which ever is lessor, shall include base flood elevation data. If any portion of the land being subdivided is subject to flooding, the plat will show the limit and elevation of the 100-year floodplain.

(6) The acreage of the land to be subdivided.

(7) Location sketch map showing relationship of subdivision site to area and town.

(8) A comprehensive drainage plan per the City of Millington Drainage Design Manual which shall include, but not be limited to an analysis of the drainage area, a storm water routing plan showing maximum quantities of flow and maximum rates of flow before and after development. A map of the drainage area in which the subdivision is located shall be included with the drainage plan and shall include the drainage structures leading to and from the subdivision with their sizes. The scale of the required map can be less than one inch equals one hundred feet (1" = 100").

(9) The location and sizes of proposed water and sewer lines.

b. When the subdivision is developed in phases or sections the following information is required for the phase or section to be developed.

(1) Plans and profiles of proposed utility layouts (sewers, water, and electricity) showing feasible connections to the existing or any proposed utility systems.

(2) A grading plan showing the existing contours in dashed lines and the finished contours in solid lines plotted at vertical intervals of not more than two (2) feet. Contours shall be extended fifty (50) feet beyond property boundary.

(3) Development plans for drainage structures and channels with the hydraulic data used in designing and sizing such structures and channels, the water surface profiles in open channels at peak flow and peak back water conditions. The limits of the drainage design parameters shall be determined by the City Engineer and the Department of Public Works.

(4) Plan and profile sheets showing all engineering data necessary for construction of proposed streets, storm drainage controls for surface and ground water, and utility layout (water and sewer) and showing all connections to existing and/or proposed streets, storm drainage and utility systems. The street profiles shall be plotted along the centerline showing the existing and finished grades, and sewer locations, drawn to a scale of not less than one inch equals one hundred feet (1" = 100') horizontal and one inch equals 10 ft. (1" = 10') vertical. Typical street cross sections shall be shown.

(5) Erosional Control Plan which shall include adequate plans showing all erosion and sediment control measures or other protective devices to be constructed in connection with or as a part of the proposed work, such as, retaining walls, cribbing and vegetative practices.

4. Estimate Cost of Improvements by City Engineer

While the City Engineer is reviewing the Engineering Plat, an estimate of the cost of installing all improvements in the subdivision will be developed and presented to the Planning Commission. This cost should include anticipated inflation during the one-year plat approval period.

5. Planning Commission Review

Within thirty days (30) after submission of the preliminary plat, the Planning Commission shall review and indicate approval, disapproval, or approval subject to modifications. A certification of action shall be issued by the Planning commission noting approval, modifications to which the approval is subject, of if disapproved a list of reasons for disapproval.

If modifications are requested by the Planning Commission or staff, the developer shall submit the revised Engineering Plat, along with a letter addressing the revisions requested, no less than thirty (30) days prior to the Planning Commission meeting.

Failure of the Planning Commission to act on the Engineering Plat within thirty (30) days will be deemed approval of this plat provided, however, that the applicant for the Commission's approval may waive this requirement and consent to the extension of such period.

6. Expiration of Approval

The approval of the preliminary plat shall lapse unless a final plat based thereon is submitted within one (1) year from the date of such approval unless an extension of time is applied for and granted by the Planning Commission.

7. Commencing Construction Prior to Final Approval

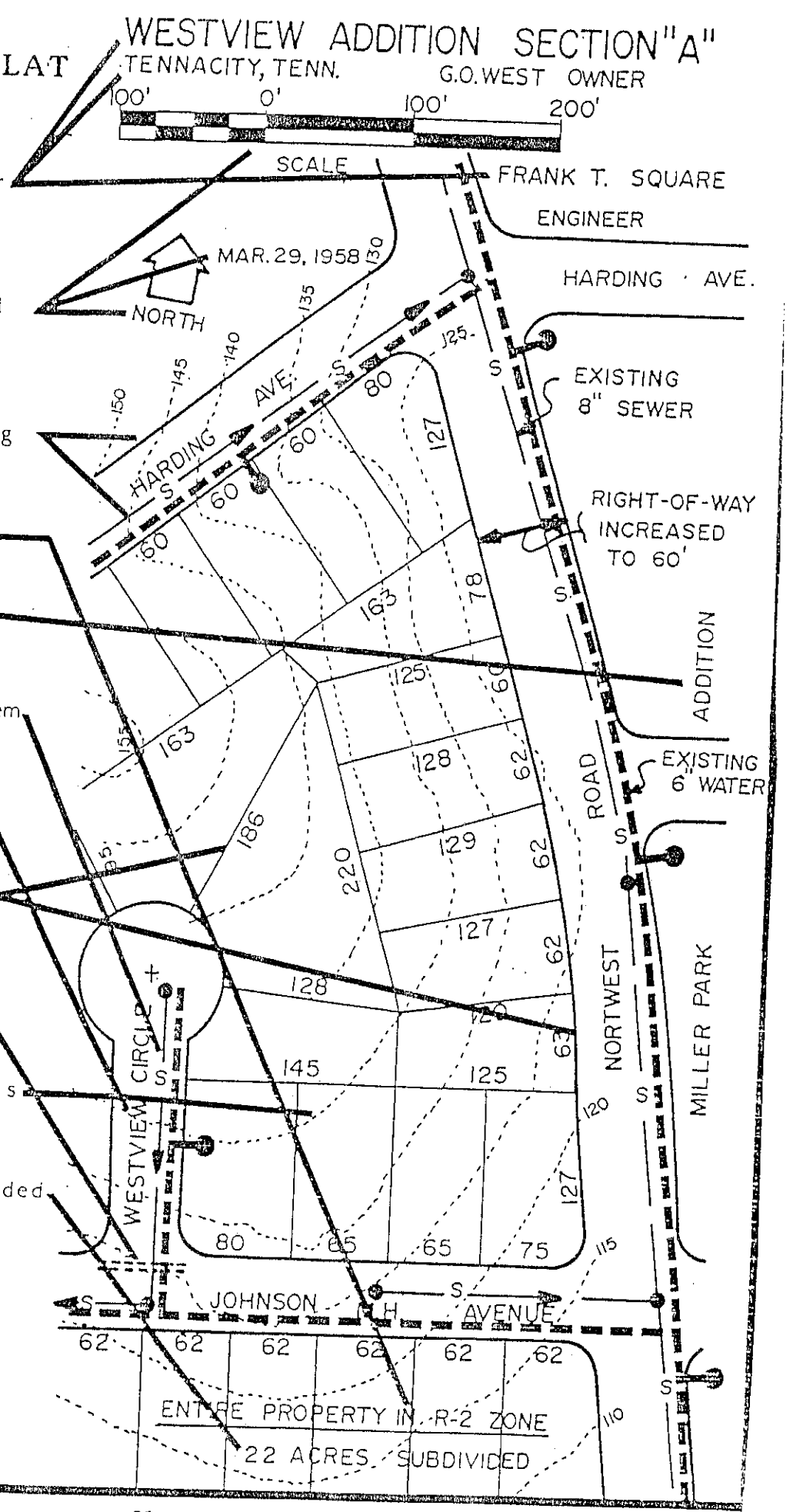
After Planning Commission approval and the entering into a subdivision contract between the developer and the City of Millington the contractor may commence the grading, installation of utilities and streets in accordance with the pubic works standards and subject to inspection by the Public Works Department and City Engineer. No construction of structures and no building permit shall be issued prior to final plat approval.

THE

ENGINEERING PLAT

SHALL SHOW:

- Name, location, owner and designer
- Date, north point and graphic scale
- Locatin of property lines, roads, existing utilities, etc.
- Present zoning classification
- Names of adjoining properties
- Proposed utility system
- Names of new streets
- Dimensions, lot lines and building setbacks
- Location of proposed culverts
- Contours at 2' intervals
- Acreage of land subdivided
- Location sketch map.



E. FINAL PLAT

The Final Plat is the culmination of the land subdivision process. When approved and duly recorded as provided by law, the Final Plat becomes a permanent public record of the survey of the lots or parcels, rights-of-way, easements and public lands, and the restrictive covenants as may be applicable to the lots or parcels within the boundary of the subdivision. As such, it serves as a vital instrument in the sale and transfer of real estate, in the dedication of rights-of-way, easements and public lands and in future land survey of the properties contained in or adjoining the subdivision.

1. Submission of Final Plat

a. The developer shall submit fourteen (14) copies of the Final Plat to the Millington Building Inspection Department no less than fifteen (15) days prior to the Planning Commission meeting at which it is to be considered. The Final Plat shall conform substantially to the approved Engineering Plat.

b. The original of the Final Plat shall be in black permanent ink on a sheet of moisture resistant drawing cloth or drafting film, twenty inches by twenty-four inches (20" x 24"), to a scale of one inch equal one-hundred feet (1" =100'). If more than one sheet is required, an index sheet of the same size shall be filed and shall show a key map of the entire area being platted. The separate sheets of the Final Plat shall be keyed alphabetically and shall have match lines with the adjoining sheets.

2. Contents of Final Plat

The Final Plat shall include the following information:

a. The lines of all streets and roads, alley lines, lot lines, building setback lines, lots numbered in numerical order, reservations for easements and any areas to be dedicated to public use or sites for other than residential use with notes stating their purpose and any limitations.

b. Sufficient data to determine readily and reproduce on the ground the location, bearing and length of every street line, lot line, boundary line, block line and building line whether curved or straight, and curved property lines that are not the boundary of curved streets.

c. All dimensions to the nearest one hundredth (100th) of a foot and bearings to the nearest minute.

d. Location and description of monuments.

e. The names and locations of adjoining subdivisions and streets and the location and ownership of adjoining unsubdivided property.

f. Date, title name and location of subdivisions and streets and the location and ownership of adjoining unsubdivided property.

g. Date, title name and location of subdivision, graphic scale, and true north point.

h. Any restrictive covenants which are to apply to lots or other parcels within the subdivision.

3. Certificates Required on Plat

The following certificates are required on the plat (forms are in the appendix):

a. Certification showing that applicant is the land owner and dedicates streets, rights-of-way, utilities and any sites for public use to Millington.

b. Certification by surveyor or engineer to accuracy of survey and plat and placement of monuments.

c. Certification by the Department of Public Works and the City Engineer of approval of water lines and sewer lines.

d. Certification of receipt of a letter from Tennessee Department of Health of their approval of water and sewage system plans signed by the Director of Public Works.

e. Certification of approval of installation of streets, water, sewer and drainage or the posting of sufficient financial surety to insure completion of all required improvements signed by the City Engineer.

f. Certification of approval to be signed by the Secretary of the Planning Commission.

4. Subdivision Development Contract

If a subdivision contract between the developer and the City of Millington was not entered into prior to submission of the Final Plat then one shall be entered into prior to the Secretary of the Planning Commission signing the certificate of the Final Plat (an example of the contract is in the appendix).

5. Planning Commission Review

Within thirty (30) days after submission of the final plat, the Planning Commission shall review and indicate approval, disapproval, or approval subject to modifications. A certification of action shall be issued by the Planning Commission noting approval, modifications to which the approval is subject and if disapproval, a list of reasons for disapproval.

Failure of the Planning Commission to act on the final plat within thirty (30) days will be deemed approval of this plat provided, however, that the applicant for the Commission approval may waive this requirement and consent to the extension of such period.

6. Submission of "as built utilities drawings"

Prior to the release of bond or recording of the final plat under the "no bond" procedure the developer shall cause to be delivered to the City of Millington a set of original "as built" drawings which show, as a minimum location by station and depth of all sanitary sewer services and water services, actual location of all other utilities and indicating any deviations from the original plans which were approved or field engineered after the construction plans were approved. The final plat will not be released for recording or the bonds and security will not be released until said "as built" drawings are accepted.

7. Effect of Final Plat Approval

Approval of the Final Plat by the Planning Commission shall not constitute the acceptance by the public of the dedication of any streets or other public ways or grounds, until all water, sewer, streets, drainage and other improvements shall have been installed, approved and accepted by the City of Millington.

8. Recording of the Approval Final Plat

Upon approval of the Final Plat by the Planning Commission, the developer shall submit to the Building Inspector the original and one (1) copy of the Final Plat. The Secretary of the Planning Commission shall attest to approval by signing the appropriate certificate of the original and copy of the plat. The Secretary of the Planning Commission shall deliver the original to the Building Inspection Department, who shall record the approved plat in the Office of the Register of Shelby County, Tennessee and shall note the date, plat book and page number of recording on the file copy of the plat.

F. MINOR SUBDIVISION

When an existing property line between two existing parcels is being relocated; two (2) existing parcels are being combined into one (1); or two lots are being created; and there is no adjustment to an existing street or extension of water or sewer lines required, the subdivision will be considered a minor subdivision. The procedure for approval of a minor subdivision plat shall consist of presenting a Final Plat per Section E of this article.

THE

FINAL PLAT

SHALL SHOW:

Streets, lots, setback lines, lot numbers, etc.

Sufficient engineering data to reproduce any line on the ground.

Dimensions, angles, and bearings.

Monuments

Names of adjoining properties

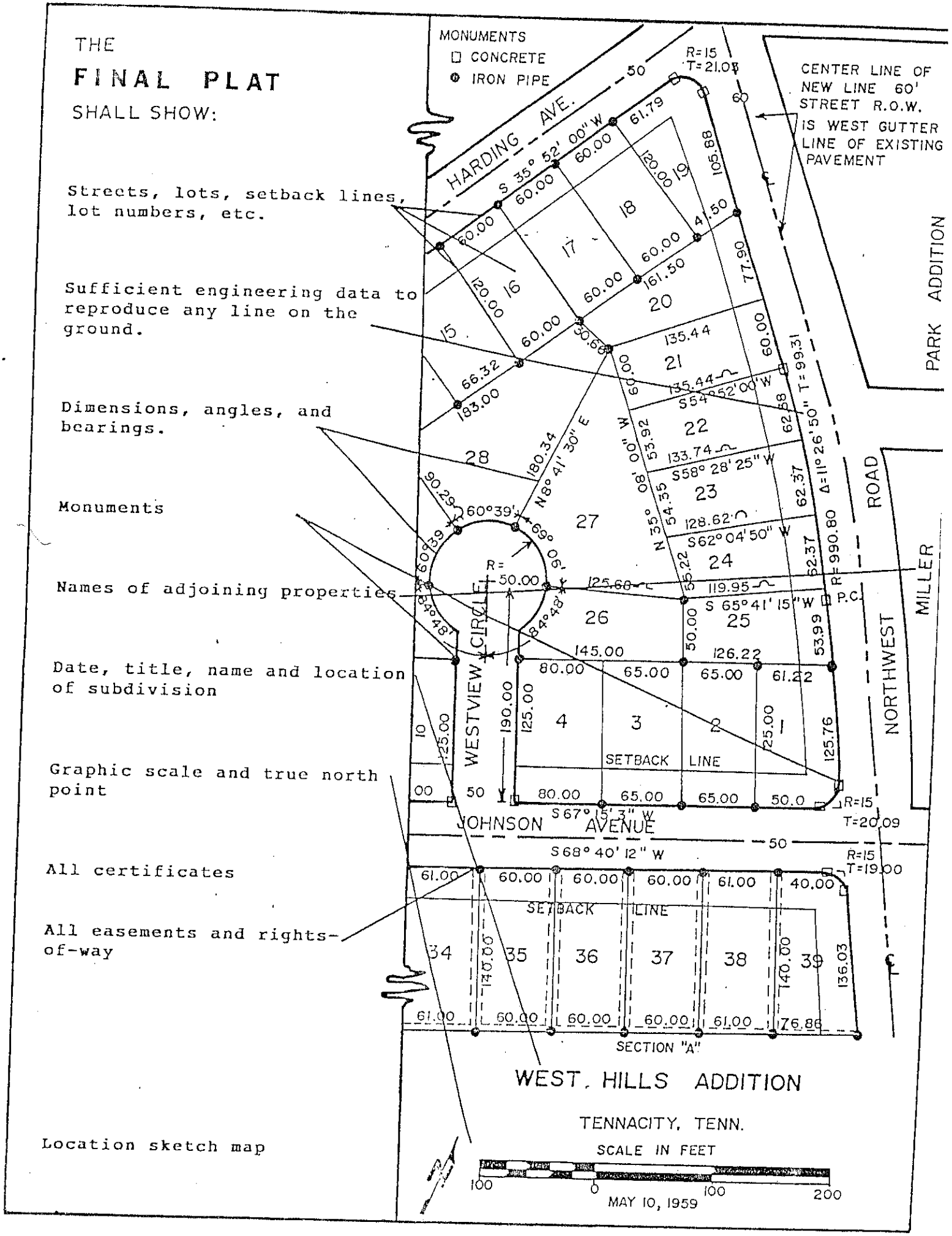
Date, title, name and location of subdivision

Graphic scale and true north point

All certificates

All easements and rights-of-way

Location sketch map



ARTICLE III GENERAL REQUIREMENTS AND STANDARDS OF DESIGN

A. GENERAL DESIGN CONCEPTS

Land subdivision design is a compromise among competing and often conflicting objectives. Users of these regulations should recognize that land subdivision is far more than means of marketing land; it is primarily the first step in the process of building a community. Once land has been divided into lots, streets established, utilities installed and building constructed, correction of defects is costly and difficult. Moreover, the development pattern is permanently engrained upon the community and unlikely to be changed. Ultimately, subdivided land becomes a public responsibility requiring the maintenance of improvements and the provisions of public services. Additionally, for the sake of future owners and the community, subdivided lands should not only be presently marketable, but should remain competitive with future developments, thereby presenting a stable and liquid investment. Therefore, the interests of the public, the developer and future owners are served by adherence to sound concepts and standards of design. To achieve the desired objectives, all subdivisions within the City of Millington must conform to the following four (4) basic design concepts.

1. External Factors

   Subdivision design must provide for external factors of community-wide concern including the proper extension of major streets, extensions of utilities, preservation of major drainage channels and of related floodlands, and the reservation of needed school and park sites. Additional external factors to be considered include proximity to local, community and regional shopping centers; to places of employment; to educational and recreational facilities and to public transportation.

2. Land Use

   Subdivision design must be related to proposed and existing land uses. Layout of a subdivision is inseparable from the use to

which the land is to be put. Moreover, adjacent land use patterns must be considered. Some uses, such as parks, certain institutional uses and bodies of surface water, may be used in the design to create value. Others, such as railroads, powers lines and associated easements, poorly subdivided lands, and unsightly strip commercial developments, may require special design techniques to minimize their depreciatory effect on property values.

3. Natural Environment

Subdivision design must give due consideration to the natural environment. Areas of natural beauty, such as fine stands of trees and prominent terrain, should be conserved by the design.

Low areas subject to flooding or areas of unsuitable soil or ground water conditions should not be put to residential use.

4. Internal Details

Subdivision design must give attention to internal design details including the proper layout of the streets, lots, utilities, needed open space and adjustment of the design to topography and soil capabilities of the land. A major aspect of internal detailing is careful attention to drainage.

B. WATER DRAINAGE

Storm water drainage is a major aspect of land subdivision design, however, it should not dominate over other important design considerations. Nevertheless, considerable attention must be given to drainage design because of the potential disastrous effects on life and property resulting from defective design. Accordingly, no land subdivision shall be approved within the City of Millington, unless a detailed drainage plan for such subdivision has been submitted to and approved by the City Engineer, the Department of Public Works and the Planning Commission. The following principles are to be applied to all drainage design for land subdivision within the City of Millington. (Refer to Millington Technical Specifications, Design

Criteria Section 300). The standards for the design of the drainage are contained in the City of Millington Drainage Design Manual.

1. Internal Regulation of Drainage

   The amount and rate of water from all sources leaving a subdivision or other developed areas shall not be significantly different after than before development unless approved by the City of Engineer.

2. Drainage System Design

   The storm water drainage system shall consist of a major and a minor element. The major element, which will operate infrequently, shall be designed to prevent the loss of life and significant property damage from any reasonable foreseeable rainfall event. The minor element, operating frequently, shall provide for an acceptable degree of convenient access to property during and after frequent normal rainfall events. Both elements of the drainage system shall incorporate storage (retention and detention) where necessary, to provide an effective solution to the problem of controlling the amount and rate of runoff. Storm drainage systems for drainage areas of less than 100 acres shall be designed to accommodate the 25-year design storm. Storm drainage system for drainage areas of 100-acres or more shall be designed to accommodate the 100-year design storm. All open channels shall be sized to accommodate the 100-year design storm plus one foot of freeboard.

3. Integrated Drainage Planning

   The developer's engineer shall submit to the Planning Commission and the City Engineer calculations showing the changes in run-off characteristics resulting from the proposed development. The City Engineer will determine the necessity of storm water retention/detention systems and notify the Developer's engineer and the Planning Commission.

The storm water drainage solution for each subdivision shall be consistent with limits as determined by the City Engineer. The overall storm water management system for the City of Millington, of which each subdivision becomes an integral part, is predicated on accommodating water from upstream while mitigating the impact of outflow on downstream areas.

C. STREET LAYOUT

The layout or arrangement of streets is the singularly most important aspect of subdivision design. To a large extent it determines the effectiveness of the drainage system. Additionally, the street layout determines the shape, size, and orientation of building sites and to a major extent, the character and beauty of residential neighborhoods and the attractiveness of non-residential developments (Refer to Millington Technical Specification, Design Criteria Section 400).

1. Conformity to the Major Street Plan

The location and width of all streets and roads shall conform to the Official Major Street Plan and any other plans of the City of Millington.

2. Relation to Adjoining Street System

The arrangement of streets in a subdivision shall provide for the continuation of existing streets in adjoining subdivisions (or their projection when adjoining property is not subdivided). The width shall be the same or greater than the existing street, but in no case less than the minimum width required. The arrangement of streets shall be such as to provide for future extension of utilities and storm water drainage, to prevent creation of severed parcels of land and to cause no undue hardship on owners of adjoining properties.

3. Relation to Existing Topography

The arrangement of streets in a subdivision shall make optimum use of the existing natural topography by designing the layout

around the natural drainage routing and by carefully adjusting the streets to the topography so as to minimize grading and drainage problems. Collector streets should generally follow valley lines and land access streets should cross contours at right angles. Side hill street locations are to be avoided where possible.

4. Relation to Land Use Density

The arrangement of streets shall, insofar as is practical, optimize the total length of streets such that the cost per lot or building site for the construction and maintenance of streets, underground utilities, and other improvements are minimal. The use of cul-de-sacs in a subdivision may be an effective means of optimizing land use density relative to other improvements.

5. Relation of Street Elevation to Drainage

Surface street elevation, at all points, shall be set to preclude periodic inundation due to the overflow of constructed or natural open channels, or due to local storm water runoff which has a flow depth exceeding the curb height. Street elevation may be raised by fill embankment providing such embankment does not result in flooding of lots or building sites within the subdivision, nor in increased flood heights upstream and downstream. Drainage openings through roadbed embankment shall not impede the flow of water except where such embankment is an integral part of a planned detention basin requiring regulated outflow. In no case shall flooding of residential lots or building sites be permitted by design.

6. Street Right-of-way

Street right-of-way, measured from lot line to lot line, shall be as shown on the Major Street Plan, or if not shown on such plan, shall be not less than listed below (in case where topography or other physical conditions make a street of the minimum required width impracticable, the Planning Commission may modify the above requirements by not more than ten (10) percent of the

specified width. In no case shall the street widths be modified solely for the purpose of increasing the area of marketable land, nor to accommodate a land use which might otherwise be inappropriate):

a. Major Thoroughfare..... 106 feet
b. Thoroughfare 80 feet
c. Major Collector Street 68 feet
d. Minor Collector Street 60 feet
e. Commercial Access Street. 60 feet

Commercial access streets are land access streets which are primarily intended to provide access to commercial and industrial properties, to office parks, and to any significant volume of traffic.

f. Residential streets 50 feet

Single family residential streets are land access streets which are primarily for access to abutting residential properties and which are designed to discourage through traffic.

g. Dead-end Street (Cul-de-sac) . 50 feet

Cul-de-sacs are permitted dead-end street which may provide access to commercial, industrial, or residential properties, and which are designed to prevent future extension. A right-of-way of 60 feet radius shall be provided for turnarounds.

h. Planned Unit Residential
Development Street 50 feet

Planned Unit Residential Development Streets are land access streets which provide access to properties within a Planned Unit Residential Development and are designed to be an integral part of the developments landscaping and open space and to avoid through traffic and on-street parking.

i. Marginal Access Street 50 feet

Marginal access streets are minor land access streets which are normally parallel to and adjacent to arterial streets and highways; which provide access to abutting properties (usually office, commercial or industrial uses); and which are designed to provide protection from through traffic and to provide maximum control of ingress and egress onto heavily travelled thoroughfares.

j. Alleys... 20 feet

Alleys are minor public ways used primarily for service access to the back or side of properties otherwise abutting on a street.

7. Additional Width on Existing Street and Sight Distance Improvements

a. The entire right-of-way shall be provided where any part of the subdivision is on both sides of the existing street.

b. Where the subdivision is located only one side of an existing street, one-half (1/2) of the required right-of-way measured from the centerline of the existing right-of-way shall be provided.

c. A non residential subdivision abutting and having access on a residential street shall provide the total additional right-of-way required for a commercial access street.

d. Where subdivision development requires an existing street be cut down for proper sight distance and the subdivision is on both sides of the street the developer shall improve both sides of the street.

e. Where subdivision development requires an existing street be cut down for proper sight distance and the subdivision is on one side of the street the developer shall improve that side of the street.

8. Restriction of Access

a. Where a subdivision fronts on an arterial street or highway, or where a non-residential use abuts on a street opposite a residential use area, the Planning Commission may require that frontage be provided on a marginal access street. Double frontage shall not be permitted between any residential or major street and a marginal access street.

b. For residential subdivisions bordering on an arterial street or highway, the Planning Commission may require, in lieu of a marginal access street, that "through" and "corner" lots be provided with double frontage on both the arterial street or highway and a single family residential street. In this case, the right of vehicular access to the arterial street or highway shall be permanently dissolved and such dissolution shall be noted permanently on the Final Plat of the Subdivision.

9. Street Alignment and Grades

In setting the alignment and grades for streets, due consideration shall be given to storm drainage. In general the depth of flow in gutters and the allowable spread of water shall be consistent with the functional classification of the street. Arterial streets shall be designed to remain virtually free of water. Deeper flows and wider spreads may be tolerated on collector and land access streets. Street alignment and grades shall be designed so that, during sever rainfall events, appreciable runoff shall not be permitted to flow across intersection. The rate of flow for runoff contained on streets shall not normally exceed ten (10) feet per second.

10. Maximum Street Grades

Grades on arterial and major collector streets shall not exceed seven (7) percent. Grades on all other streets shall not exceed ten (10) percent.

11. Horizontal Curves

The minimum centerline radius permitted for each street classification is as shown below.

Arterial Street	as determined by City Engineer
Non-residential Collector	400 feet
Residential Collector Street	250 feet
Minor Residential Street	100 feet
Marginal Access Street	100 feet
Loop Streets	100 feet
Dead End Streets	100 feet

In all cases, horizontal curves shall be designed to provide a minimum two hundred (200) feet sight distance between any two points within the paved street surface.

All street radii will be subject to review by the city engineer and may be required to be greater than the minimum where necessitated by design and safety considerations.

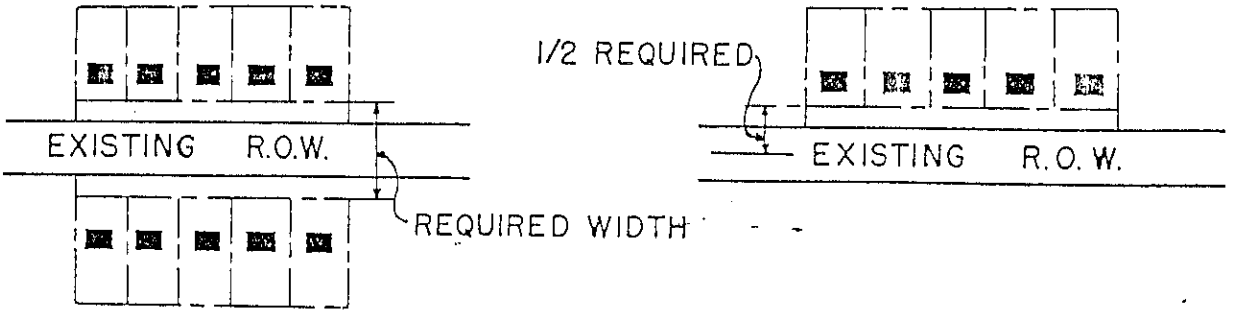
12. Vertical Curves

Every change in street grade shall be connected by a vertical curve designed to afford a minimum sight distance of two hundred (200) feet as measured from a driver's eyes, which are assumed to be four and one-half (4 1/2) feet above the paved surface, to an object four (4) inches high on the pavement. Vertical curves shall be of standard parabolic design. (Refer to Chart in Millington Technical Specifications, Design Criteria Section 400).

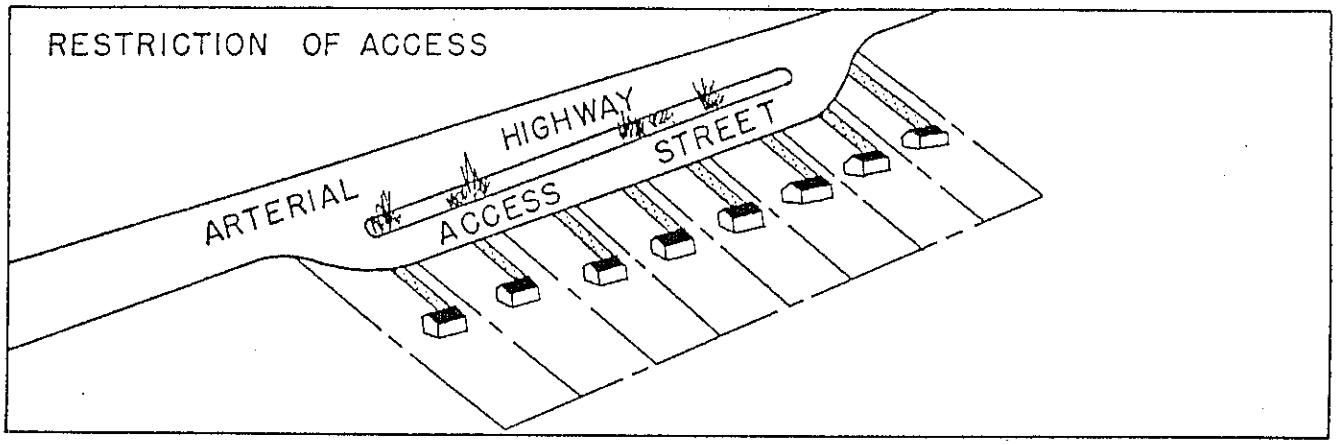
13. Intersections

a. The angle of intersection between two major streets or between a major street and a land access street shall, generally, be a right angle, but in no case shall such intersection be less than eighty-five (85) degrees of arc.

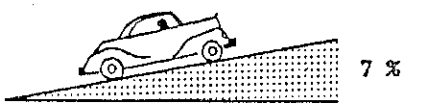
EXISTING STREETS- ADDITIONAL WIDTH

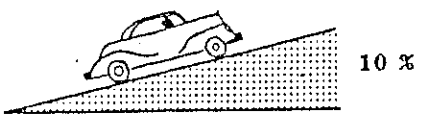


RESTRICTION OF ACCESS

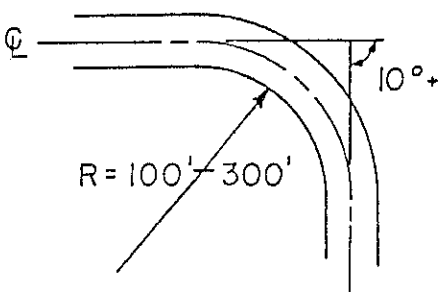


MAXIMUM GRADES

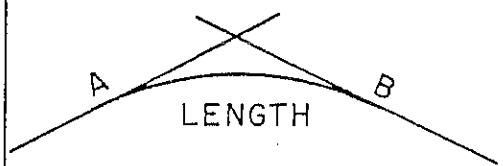




HORIZONTAL CURVES



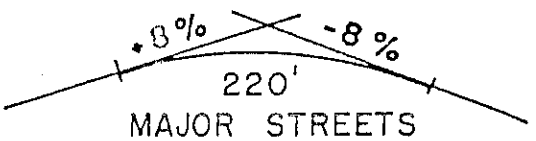
VERTICAL CURVES

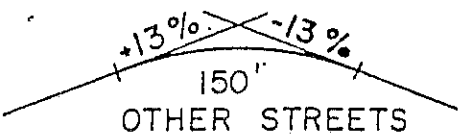


MAJOR STREETS 15 (A-B) FT.

OTHER STREETS $\frac{15}{2}$ (A-B)

EXAMPLE:





b. Property line radii at street intersections involving arterial or collector street shall be not less than thirty-five (35) feet. All other intersections shall have property line radii of not less than twenty-five (25) feet.

14. Intersection Sight Distance

a. On a corner lot, within the area formed by the centerlines of streets at a distance of one hundred (100) feet from their intersections, there shall be no obstruction of vision between a height of two and one-half (2 1/2) feet and a height of ten (10) feet above the average grade of such street or railroad at the centerline thereof. The requirements of this section shall not be deemed to prohibit any necessary retaining wall.

b. In instances of streets with more than a single lane in each direction, i.e. two or more lanes in each direction, on a corner lot, within the area formed by the intersections of the outer or right hand lanes of each street at a distance of one hundred (100) feet from their intersection there shall be no obstruction of vision between a height of two and one-half (2 1/2) feet and a height of ten (10) feet above the average grade of such street or railroad at the intersection thereof. This shall not prohibit any necessary retaining wall.

15. Tangents

A tangent street segment shall be introduced between reverse or compound curves, where necessary, to provide a minimum sight distance of two hundred (200) feet from any two points within the paved street surface. Between reverse curves on arterial and collector streets, a tangent of not less than one hundred (100) feet in length shall be provided.

16. Street Jogs or Offsets

Street jogs with centerline offsets of less than one hundred twenty-five (125) feet shall not be allowed.

17. Dead-end Streets

a. Cul-de-sacs designed to have one end permanently closed shall be no more than six hundred (600) feet long. They shall be provided at the closed end with a turn-around having an outside roadway diameter of at least one hundred (100) feet and a street right-of-way diameter of at least one hundred and twenty (120) feet. The Planning Commission may approve an alternate design to meet unusual site conditions.

b. Where the Planning Commission determines a need for future access to adjacent properties, proposed subdivision streets shall be extended or additional street segments provided to the boundary of the subdivision at locations specified by the Planning Commission. Such extensions or additions shall be designed as temporary turnarounds having a paved area with a diameter equal to the width of the required street right-of-way.

18. Private Streets, Access Easements and Reserve Strips

a. Private streets will meet the same standards as public streets as set forth in Article IV and the technical specifications of the Millington Subdivision Regulations. Access or Travel easements shall be permitted provided that they have a minimum width of fifty (50) feet, that they serve no more than one lot and that they be permanently recorded in perpetuity. Utility easements shall provided as required by the Planning Commission and other provisions of these regulations.

b. There shall be no reserve strips controlling access to streets, except where the control of such strips is definitely placed with the City of Millington under conditions approved by the Planning Commission.

19. Street Names

Proposed streets which are obviously in alignment with others already existing and named shall bear the names of existing streets. In no case shall the name for a proposed street duplicate an existing street name irrespective of the suffix used, i.e., street, avenue, boulevard, drive, parkway, cove, court, or place.

20. Alleys

Alleys must be provided unless specifically waived by the Planning Commission to serve the rear of lots or building sites used for commercial or industrial purposes. Alleys shall not be provided in any solely residential block. Resubdivision of land for residential use in areas where alleys exist shall provide for vacation of such alleys.

D. BLOCKS

Block configuration within a subdivision is essentially determined by the street layout; hence, it must be considered concurrently with the alignment of streets.

1. Block Length

Blocks shall be not less than three hundred (300) feet nor more than fifteen hundred (1500) feet in length measured centerline to centerline of street, except as the Planning Commission may deem necessary to secure efficient use of the land or desired features of street pattern. The Planning Commission may require one or more public cross walks of not less than ten (10) feet in width extending entirely across the street at locations deemed necessary.

2. Block Width

Blocks shall be wide enough to allow two (2) rows of lots, except where double frontage or open space is provided or required, or where prevented by topography or other physical conditions of the site. In such cases, the Planning Commission may permit a single row of lots.

E. LOT LAYOUT

In general, all lots within a Subdivision shall have about the same area. Minimum lot areas and frontages are specified in the Millington Zoning Ordinance, however, a subdivision plan should not be predicated solely on producing a maximum density, the lot layout plan should give balanced consideration to the natural topography of the tract being subdivided, to the conservation and preservation of the natural environment, to the provision of adequate open space, to the enhancement of the character and beauty of the community, to the optimization of lot density to improvements ratio and to the protection of life and property.

1. Adequate Building Site

Each lot shall contain a building site not subject to flooding or other hazards as defined in Section G of this article, and such site shall be outside the limits of any easements, rights-of-way, building lines, side yards, rear yards, buffers, screens, or landscaped areas which are existing or are required by the Millington Zoning Ordinance.

2. Arrangement of Lots

Where practical, side lot lines shall be at right angles to street lines and radial to curved street lines. Each lot shall front on a public street or road which has a right-of-way width of not less than fifty (50) feet. Where lots abut on an arterial street; double frontage, marginal access or other acceptable arrangements shall be made to control ingress and egress onto such streets from the individual lots.

3. Minimum Size of Lots

The size, shape and orientation of lots or building sites shall be as the Planning Commission deems appropriate for the intended

use and topography of the site, for adjoining land uses, and for the protection of life and property.

a. The minimum area and dimensions of residential lots shall be as specified by the Millington Zoning Ordinance.

b. The minimum area and dimensions of office, commercial and industrial tracts shall be as specified by the Millington Zoning Ordinance and such tract shall also provide adequate space for the off-street service and parking facilities, landscaping and screening required by the type of use and proposed development.

4. Building Setback and Yard Requirements

All lots or tracts shall have at least the minimum front, side, and rear yard that is required by the Millington Zoning Ordinance. To accommodate site peculiar conditions, such as side yard drainage, the Planning Commission may require increasing the yard requirements for a given lot or tract.

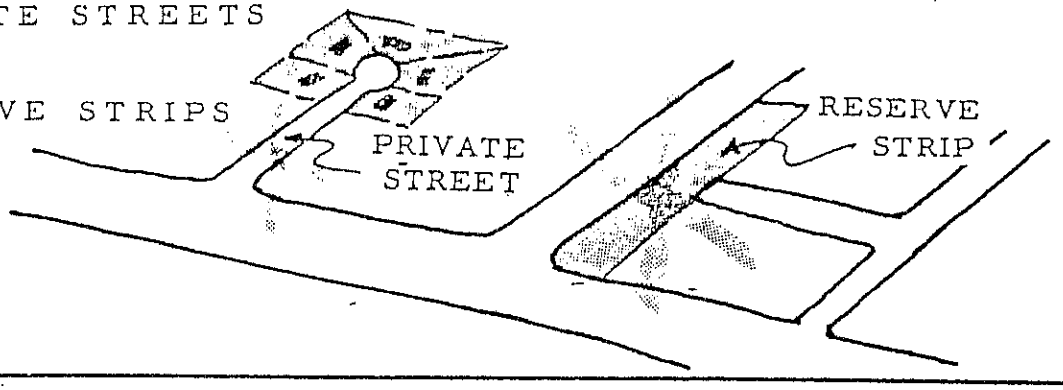
5. Large Tracts or Parcels

Where land is subdivided into larger parcels than ordinary building sites, such parcels shall be arranged to allow for future opening of streets and for logical resubdivision. In no case shall this be construed to allow the creation of severed parcels.

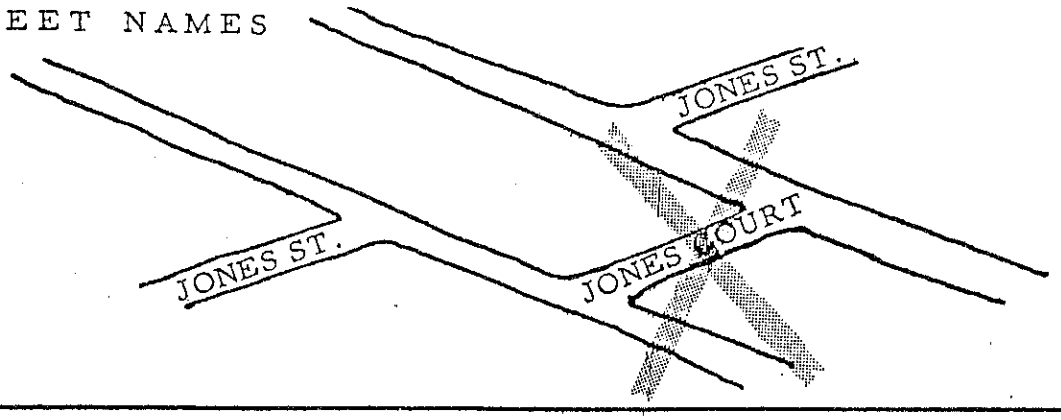
6. Lot Drainage and Grading

Where possible, lots shall drain toward the street or toward both the street and the rear lot lines. In case of drainage to the rear lot line, lateral drainage along rear lot lines shall be required, necessitating careful attention to grading. Where required by the topography, side yard

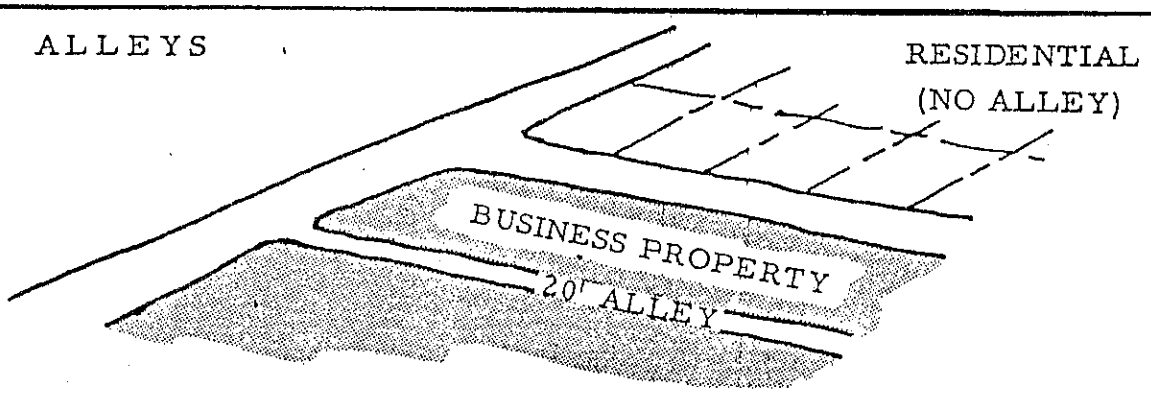
PRIVATE STREETS
AND
RESERVE STRIPS



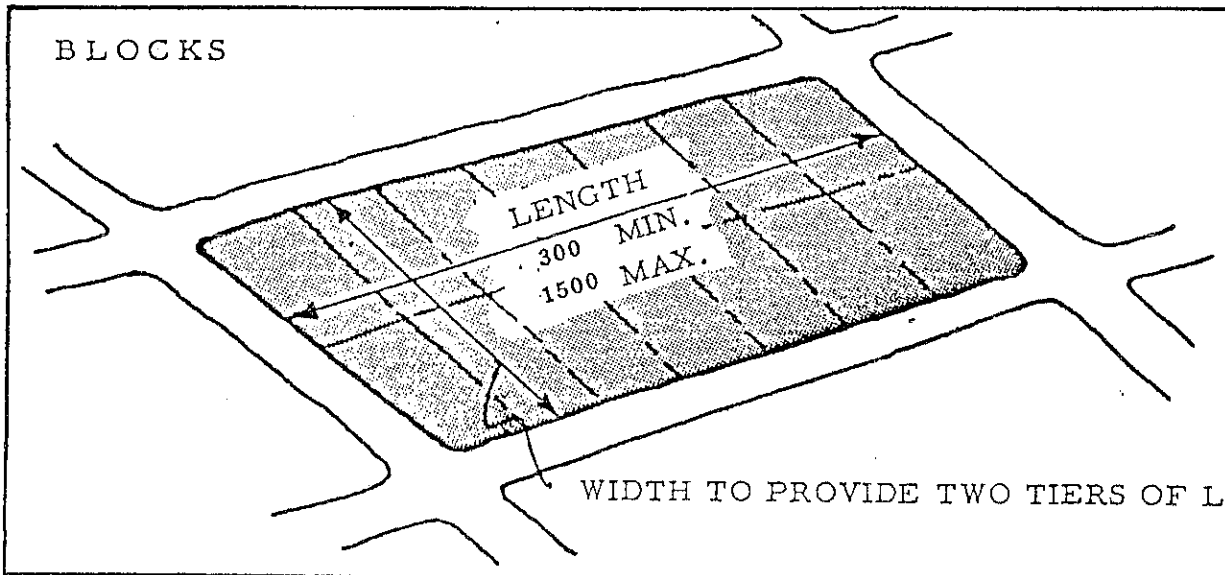
STREET NAMES



ALLEYS



BLOCKS



drainage may be required, in which case it may be necessary to increase minimum side yard requirements. Terracing of lots, particularly in residential subdivisions, shall be avoided unless essential for erosion control or to reduce the velocity of runoff.

F. OPEN SPACE AND EASEMENTS

No single aspect of subdivision design contributes more to the attractiveness and value of a subdivision development than the effective use of open space. The provision of open space and easements, preferably designed for multiple uses, is an essential consideration in the planning and design of both residential and non-residential subdivisions.

1. Conformity to Land Use Plans

Where a school, park, playground or access to water frontage, shown on an official land use map or plan adopted by the Planning Commission, is located wholly or partially within the proposed subdivision, the Planning Commission may require the reservation, for a period of time not to exceed six (6) months from final plat approval, of needed open space within the tract being subdivided; however, such reservations shall no exceed twenty-five (25) percent of the gross area of said tract.

i

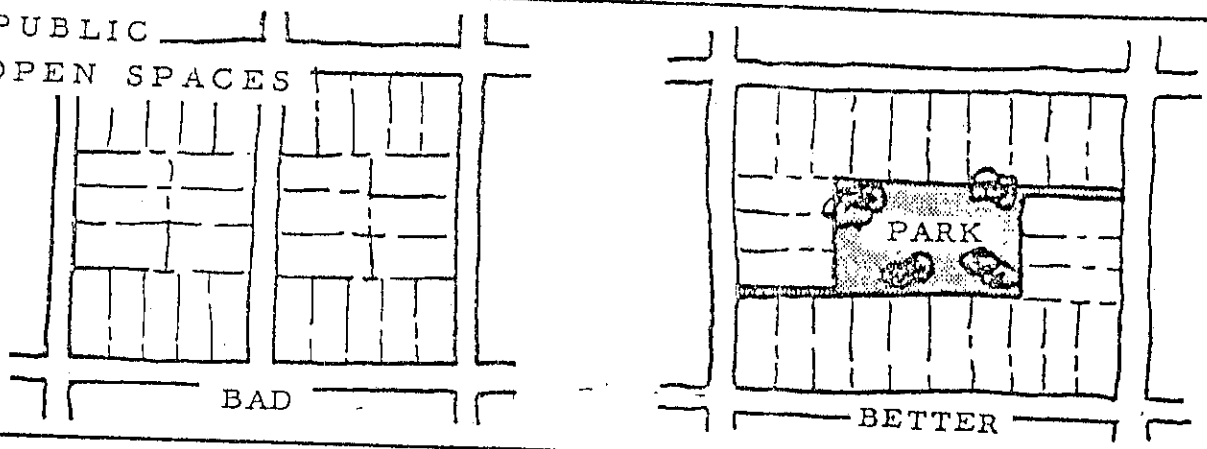
2. Open Space for Control of Storm Water Runoff

Where necessary, design of permanent and temporary ponding shall be an integral part of subdivision design. Such design shall consider opportunities to create open space and landscaped areas for ponding while at the same time considering dual uses, such as public neighborhood parks and playgrounds or private use recreational areas.

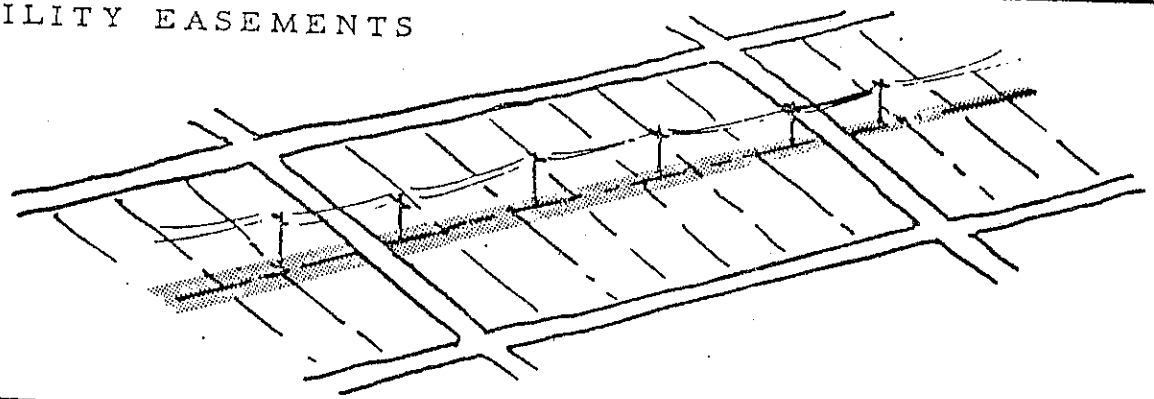
3. Easements for Open Channel Drainage

Each open channel, including retention and detention ponds, natural or constructed, shall be provided an easement of width

PUBLIC OPEN SPACES

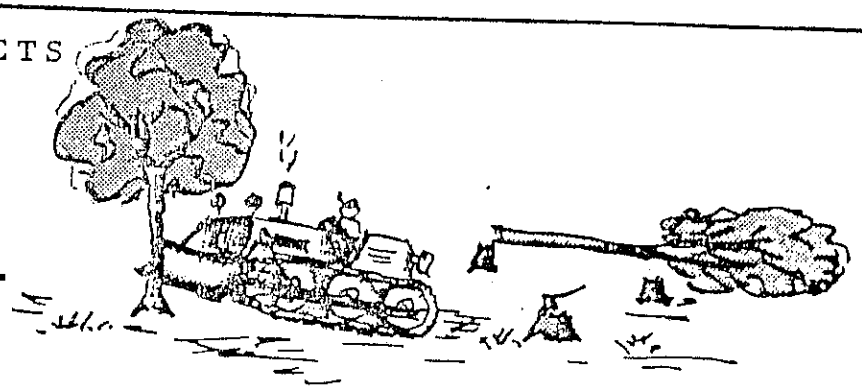


UTILITY EASEMENTS

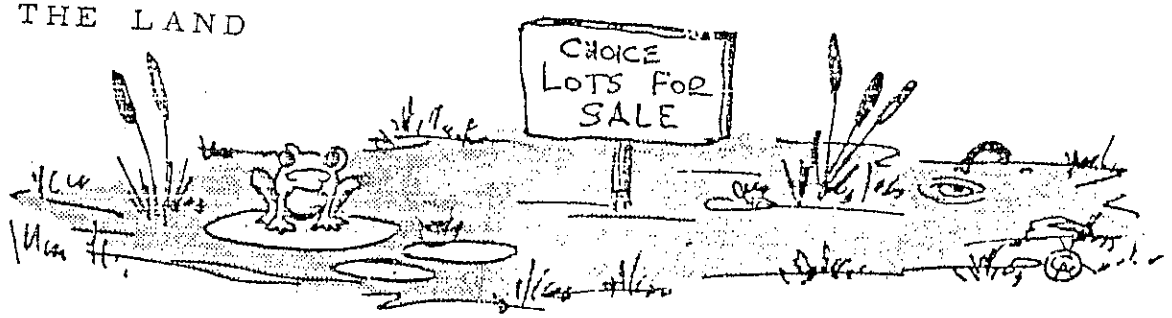


COMMUNITY ASSETS

DON'T -



SUITABILITY OF THE LAND



sufficient to accommodate major runoff events. Such an easement shall also provide for operation of construction and maintenance equipment, erosion control, insect vector control, landscaping and operations of any water level flow control structures. The easement shall be a minimum of ten (10) feet in width and a maximum of twenty (20) feet on either side of the channel.

4. Easement for Utilities

Utility easements with a minimum width of five (5) feet shall be provided along all rear lot lines. Utility easements with a minimum width of five (5) feet shall be provided along all front lot lines. Where required to permit efficient layout of utilities or to provide access to rear lot lines, utility easements not less than five (5) feet in width shall be provided along side lot lines. Where deemed necessary, the Planning Commission may require utility easements to have a width to a maximum of fifteen (15) feet. Unless approved by the Planning Commission no landscape plantings except for lawn grasses and other appropriate ground cover vegetation, shall be permitted within a required utility easement. Planting restrictions within utility easements shall be noted on the Final Plat.

5. Landscaped Buffers and Screens

Open space shall be reserved for fences and vegetative screening and other landscape areas as required by the Millington Zoning Ordinance and by these Subdivision Regulations. The design of landscaped buffers and screens shall be in accordance with the Technical Specifications of the City of Millington and shall be subject to review and approval of the Planning Commission. Where residential lot have a double frontage on public streets, there shall be a continuous screening of acceptable design along the rear of such lots.

6. Conservation and Preservation of Community Assets

For all types of land uses, due consideration shall be given to providing open space needed to conserve notable features of the natural environment such as large trees, watercourses, and prominent scenic terrain. Adequate provision shall be made to protect and preserve historical sites or similar community assets which add to the attractiveness and value of property.

7. Private Use Open Space

Open space may be reserved for private use contingent upon residency or employment; however, such open space shall not become the responsibility of the City of Millington, rather the owners or members of an owner's association shall have full responsibility for all care, preservation, and maintenance of the grounds and facilities contained within the reserved open space. An appropriate provision, declaring the responsibilities of the owner or owner's association and absolving the City of Millington of any responsibility for private use open space, shall be included in the covenants and restrictions of the subdivision.

8. Preservation of Open Space

Once an area has been designated as a landscaped area, buffer, screen or other permanent open space, whether for public or private use, it shall not be encroached upon by any building, structure, or parking area, and shall be so noted on the Final Plat of the subdivision.

G. SUITABILITY OF LAND

The Planning Commission shall not approve the subdivision of land where it has been found that, in the public interest, the land is not suitable for subdivision development of the type proposed. Any land use which shall result in increase upstream or downstream flooding, endanger health, life or property or aggravate downstream erosion, sedimentation or pollution shall not be approved for subdivision. Any land within a proposed subdivision which is unsuitable for the intended use shall be reserved for open space or other compatible uses which will not be endangered by any inherent hazard of the site.

1. Residential Land Use

Land which is subject to flooding or which has unsuitable soil or ground water conditions shall not be subdivided for any type of residential use.

2. Building Site Suitability

No lot or tract intended for use as a building site shall be permitted where a natural or manmade condition, on or adjacent to such lot or tract, may endanger the integrity of any building or structure erected on the site.

H. PLANNED UNIT DEVELOPMENT

The concepts of Planned Unit Developments may be applied to residential developments. The purpose of Planned Unit Development is to provide for comprehensive larger scale site planning which may be carried out concurrently with land subdivision planning and design, and to permit maximum innovation and design variation while requirements of the Millington Code of Ordinances shall be complied with and unless specifically waived or modified by the Planning Commission, all requirements of these Subdivision Regulations shall be adhered to.

ARTICLE IV PREREQUISITES TO FINAL SUBDIVISION APPROVAL

A. General Requirements

As a condition precedent to the final acceptance of any subdivision, subdivision addition or resubdivision, every subdivision developer shall be required to grade and improve streets and other public rights-of-ways, to install survey monuments, utilities, curbs, sidewalks, sewers, water mains, storm water inlets, surface and ground water drainage channels and structures, and buffer screens, and to prepare and plant landscaping in accordance with these regulations and the Technical Specifications of the City of Millington. In lieu of the completion of such improvements prior to final subdivision acceptance, the Planning Commission may accept a bond, or other financial surety in an amount and with surety and conditions satisfactory to it, providing for and securing to the City of Millington the actual construction and installation of such improvements within a period specified by the Planning Commission and expressed in the bond, or financial surety agreements.

B. Subdivision Development Contract

The Board of Mayor and Aldermen of the City of Millington will enter into development contracts with a subdivision developer. Other provisions of these regulations notwithstanding, prior to final subdivision plat approval, a subdivision development contract between the developer and the City of Millington must have been approved and signed and sealed by the Mayor of the City of Millington and all required deposits of funds shall have been made by the developer by competent negotiable instruments.

C. Planned Unit Residential Developments

No final subdivision plat shall be approved by the Planning Commission for a Planned Unit Residential Development until the applicable requirements of the Planning Unit Regulations of the Millington Zoning Ordinance have been complied with by the developer and necessary variances have been favorably acted on by the Board of Zoning Appeals.

D. Survey Monuments

Permanent and semi-permanent survey monumentation is an essential by-product of the land subdivision process. Such monumentation facilitates resurvey of the lands contained within the subdivision and provides survey control points for future casdastral and cartographic surveys and mapping. Each subdivision developer shall provide, at his expense, all survey monumentation and documentation specified herein.

1. Permanent Monuments

Concrete monuments four (4) inches in diameter or four (4) inches square, three (3) feet long with a flat top, shall be set at all corners on the exterior boundaries of the subdivision. The top of the monument shall be set with a 2 1/4" Brass cap stamped "control monument" and the name and license number of the firm or surveyor setting said monument. The top of the monument shall be set flush with the finished grade. Permanent monuments will be referenced to the National Geodesic Survey Standards and reference information shall be included on the final plat.

2. Semi-permanent Monuments

a. All lot corners in the Subdivision not set with a permanent monument shall be marked with an iron rod not less than five-eighths inch (5/8") in diameter and twenty-four inches (24") long, set flush with the finished grade of the surrounding surface.

b. Upon completion of subdivision development, these metal rods shall be protected by one (1) or more flagged guard stakes.

3. Unauthorized Survey Marks

Survey reference marks, benchmarks, witness marks, or auxiliary corners which are unsightly or damaging to curbs, gutters, sidewalks, driveways and street pavements shall not be

permitted. Any such unauthorized marks and corners shall be removed or repaired by the developer at his expense, prior to final subdivision plat approval.

1. Survey Documentation

The developer shall provide to the City Engineer, prior to final plat approval, a detailed description of all new and recovered permanent survey monuments lying within or on the boundary of the subdivision. Each description shall include:

(1) A physical description of the monuments.

(2) Instructions for locating the monuments with respect to a fixed prominent landmark.

(3) Survey data in addition to that shown on the final plat which shall, when available, consist of adjacent plane coordinates and elevation, survey precision and accuracy and datum to which coordinates and elevation refer.

E. Storm Drainage

The developer shall construct and install at his expense within the subdivision all channels, ditches, structures, and storage basins with sufficient hydraulic capacity to control storm water runoff and emergent ground water originating within and upstream of the subdivision. Drainage improvements also include proper building site and lot grading and erosion and insect control. (Refer to Millington Technical Specifications, Design Criteria Section 300 and Site Work Section 2721, and the City of Millington Drainage Design Manual).

1. Drainage Channels and Structures

a. The size and quality of drainage channels and structures shall conform to the drainage plan approved for the subdivision. The required drainage facilities include all underground pipe,

inlets, catch basins, manholes, retention and detention ponds, open-channel ditches, and porous pipe and french drains.

b. All storm drainage pipe shall be reinforced concrete pipe. The maximum size of underground storm sewers shall be sixty (60) inch diameter and the minimum size shall be eighteen inch (18") diameter.

c. All open channel drainage requiring a cross-sectional area of one hundred (100) square feet or less shall be contained in concrete lined vertical wall ditches.

Where cross sections in excess of one-hundred (100) square feet are required, at minimum, that portion of the ditch carrying the 10-year storm shall be concrete lined by the developer. The remainder of the channel wall will be improved and provide sufficient easements and capacity for drainage, bank stabilization and the access of maintenance equipment. (Easement widths are in Article III "General Requirements and Standards of Design").

Drainage channel design and installation will be subject to review and approval of the City Engineer.

2. Insect Vector Control

All drainage channels and structures shall be constructed to eliminate breeding areas for mosquitoes and other insect pests. Other improvements such as widening, deepening, relocating, clearing, protecting or otherwise improving stream beds and other water courses within the subdivision, and including such water courses as may be constructed by the developer outside of the subdivision for the control of mosquitoes and other public health nuisances shall be provided by the developer in accordance with the standards and requirements of the City Engineer and the Shelby County Health Department.

3. Lot and Building Site Drainage

a. The developer shall provide to each building within the subdivision a detailed, coordinated grading plan designed to insure proper drainage of all lots and building sites. Lot and site grading by individual builders shall conform to the coordinated grading plan furnished by the subdivision developer. Detailed storm water management plans are required by the Zoning Ordinance. The builder shall present his drainage/grading plan at that time and it will be compared to the developer's drainage/grading plan to insure drainage from the lot will not substantially deviate from that proposed by the developer.

b. All lots and building sites within the subdivision shall be graded to provide drainage away from all principal use buildings, and all accessory use buildings covering two-hundred (200) square feet or more of the lot or site. A minimum of 3.3 percent slope shall be required to provide positive drainage of front yards to adjacent streets, or to an adequate drainage system. Deviations from this requirement may be allowed for unusual topographic conditions only with prior approval of the City Engineer.

4. Non-Residential Development Drainage Requirements

a. There shall be no off-site surface drainage from commercial and industrial developments. Within such subdivision developments all storm water drainage shall be collected on site and conveyed by drainage structures to the public storm sewer system in accordance with an approved drainage plan.

b. Commercial and industrial developments shall have all drainage structures designed by the retention and slow release method. The design calculations for such structures shall be submitted to the City Engineer for approval prior to construction.

F. Street Improvements

The developers shall construct and pave all public or private streets, roads and alleys at his expense to the approved alignment, grades and

cross sections. Deviations due to site peculiar conditions may be allowed only with prior approval of both the Planning Commission, Department of Public Works and the City Engineer. The developer will pay for all engineering inspection and laboratory cost incidental to the construction of subdivision streets including, but not limited to material and density tests. (Refer to Millington Technical Specifications, Design Criteria, Section 400 and Site Work, Sections 2110, 2210, 2215 and 2221).

1. Special Precautions

   Where streets are constructed under or adjacent to existing major electric transmission lines or major gas transmission lines, the nearest edge of the pavement shall be a minimum of fifteen (15) feet from any transmission line structure. All street grading shall be done in a manner which will not disturb the structure nor result in erosion endangering the structure. In the case of electric transmission lines, the clearance from the pavement surface to the nearest conductor shall meet the requirements of the National Electrical Safety Code.

2. Minimum pavement width for all subdivision street shall have a paved surface as set forth below measured from curb to curb.

   a. Arterial Streets. . . . . .(See Major Road Plan)

   b. Collector Streets. . . . . 40 feet

   c. Minor Residential Streets. . 34 feet
      Most minor streets in residential developments involved parking and/or considerable traffic.

   d. Marginal Access. . . . . 34 feet
      Maximum length 1200 feet or 25 dwellings units

   e. Loop Streets. . . . . 34 feet

   f. Dead-end Streets
      (cul-de-sac). . . . . .34 feet

Maximum length 600 feet or 15 dwelling units. Cul-de-sacs shall have a paved turnaround with a 50-foot radius.

3. Roadway Subgrade Preparation

a. Clearing and Grubbing

Before roadway grading for public and private streets is started, the entire right-of-way area shall be cleared of all stumps, brush, roots, all trees not intended for preservation, and all other objectionable materials, The cleared and grubbed material shall be disposed of in a legal manner, away from the construction site and subdivision. (Refer to Millington Technical Specifications, site Work, Section 2110).

b. Excavation

During construction, roadbed excavations for public and private streets should be maintained in a smooth condition with sufficient slope to insure adequate drainage under all weather conditions. All obstructions, such as roots, stumps, bounders and other similar material, shall be removed to a depth of two (2) feet below the subgrade. Rock, when encountered shall be scarified to a depth of twelve (12) inches below the subgrade. All loose material in the roadway shall be compacted in the manner prescribed by the City Engineer. All work shall be in conformance with sections 2110 and 2215 of the Technical Specifications.

c. Embankment

All suitable material from roadway excavations for public and private streets may be used in the construction of roadway embankments. Excess or unusable materials shall be legally disposed of away from the construction site. Maximum density and optimum moisture shall be

determined in accordance with AASHTO T-99, method maximum density, unless otherwise specified. The fill material used in the construction of embankment shall be spread in layers no to exceed six (6) inches loose and shall be compacted at optimum moisture content by a sheep's foot roller or other compaction equipment approved by the City engineer. During construction, embankments shall be maintained in a smooth condition with sufficient slope to insure adequate drainage under all weather conditions. (Refer to Millington Technical Specifications, site work, Section 2221).

4. Pavement Base Course

After preparation of the subgrade, the roadbed shall be surfaced with an approved material conforming to the Technical Specifications of the City of Millington. The base material shall be either: gravel base material which shall be a hard durable road type gravel with size gradation from two (2) inches down to fine dust in accordance with Section 02215 of the Millington Technical Specifications; or a soil cement base as designed by an accepted soils laboratory testing firm under direct approval by the city engineer. After compaction, the base shall be at least six (6) inches thick or more as specified on page nine (9) of the Design Criteria, Section 400. When curbs and gutters have been waived per the provisions of Article IV, Section H, the pavement base shall extend 3 feet beyond the required width of the paved surface to serve as shoulders for the road.

5. Roadway Surfacing

The road or street surface shall consist of two (2) inches of approved asphalt and shall be installed per Section 2513 of the Technical Specification as a base course with a one (1) inch wearing surface added within one year.

Before laying asphalt, a prime coat of bituminous material shall be uniformly applied per Section 2513.

The Planning Commission and the City Engineer may specify additional requirements for road improvements warranted by soil conditions or the type and amount of traffic.

G. Environmental Protection and Preservation

Protection and preservation of the environment, particularly its natural features such as ground cover, trees, soils, and watersheds, is an essential element of subdivision design. The developer shall provide, at his expense, all erosion control revegetation planting, and protection for existing vegetation.

1. Erosion Control

a. During all phases of subdivision development, positive measures shall be taken to minimize erosion by wind and water. Where necessary, appropriate erosion protection shall be provided to prevent interference with drainage and roadways by build-up of eroded soil and associated debris. Such eroded material shall be promptly removed by the developer and where necessary streets shall be cleaned at the developers expense.

b. The developer shall submit a plan and schedule for soil erosion and sedimentation control to the Planning Commission and City Engineer for approval. The developer shall provide necessary erosion control such as seeding for gentle slopes (1:.25) slope), grass sod for sharper slopes, with special grading and terracing in accordance with the plans approved by the Planning Commission and City Engineer. All freshly excavated and embankment areas not covered with satisfactory vegetation shall be fertilized, mulched and seeded and/or sodded as required to prevent erosion. Storm sewer inlets shall have debris and sediment guards as approved by the Planning Commission and City Engineer to trap sediment and avoid possible damage by blockage. Provisions shall be made to accommodate increased runoff caused by changed soil and surface conditions during development.

Runoff shall be intercepted and safely conveyed to storm drains or natural outlets where it will not erode or flood land. Sediment basins shall be installed and maintained to collect sediment from runoff waters. If it is determined by the City of Millington that the necessary erosion control is not being provided by the subdivider, the City of Millington shall officially notify the subdivider of the problem. If the developer has not begun to provide satisfactory erosion control within fifteen (15) days after the notice, the City of Millington shall make the necessary improvements to eliminate the erosion problem documenting all expenses incurred. Prior to release of the bond or recording of a final plat under the "no bond" procedure, all expenses incurred by the City of Millington shall be paid in full by the developer.

2. Preservation of Trees and Revegetation

No trees of caliper ten (10) inches or larger measured five (5) feet above the surrounding ground surface shall be removed if at all possible and special attention shall be given to preserving larger trees. For removal of trees greater than twelve (12) inches in diameter, the Planning Commission may require a plan of revegetation, in order to recover soil stabilization, percolation or buffering lost by removal of such trees.

H. Sidewalks, Curbs, Gutters and Handicap Ramps

The developer shall install along all public and private streets, at his expense, all sidewalks, curb and gutters and handicap ramps within the subdivision and within the right-of-way of all existing streets bordering the subdivision. (Refer to Millington Technical Specifications, site work, Section 2528). The Planning Commission shall have the authority to waive the installation of curb, gutter and sidewalks within the Residential Large Lot (RLL) zoning district. When the Planning Commission waives the requirement for curb, gutter and sidewalk, the developer will install 3 foot wide gravel shoulders and sod all drainage ditches. The drainage ditches shall be designed according to the Millington Drainage Design Manual. The slope of the sides of the

SCHEDULE OF FEES

SUBDIVISION DEVELOPMENT

Submission of Plans.....$ 200.00
plus $ 1.00 for each lot over ten (10)

Recording Fee.....$ 50.00
for the 1st sheet plus $ 15.00 per each additional sheet.

Water Connection Fee.....$ 450.00
per lot 1" meter

Sewer Connection and Development Fee.....$ 500.00
per lot

Street Light Fee.....$ 300.00
per lot

Subdivision Inspection Fee.....$ 50.00
per lot

drainage ditch shall not exceed 2.5 to 1 and the bottom of the ditch shall be 24 inches wide. The bottom of the drainage ditch shall be paved with the pavement being 4 inches thick and 2 feet wide.

1. Sidewalk Locations

For the safety of pedestrians and of children at play or enroute to school, sidewalks shall normally be required on both sides of streets. Sidewalks shall be located in the street right-of-way with the outside edge coinciding with the right-of-way line.

2. Minimum Sidewalk Widths and Cross Section

All sidewalks shall have a main slab not less than four (4) inches thick. For proper drainage, all sidewalks shall have one-fourth inch (1/4) per foot slope toward the adjacent street. Sidewalks shall conform to the following minimum widths:

a. Single-family Residential Sidewalks. . . . 4 feet

b. Multi-family. . . . . 5 feet

c. Commercial Non-residential Sidewalks. . .5 feet

3. Curbs and Gutters

Curbs and gutters shall be permanent integral type six inch (6") concrete curbs with twenty-four inch (24") concrete gutters. Only the standard six inch (6") and twenty-four inch (24") curbs and gutters shall be permitted. On arterial and collector street's gutter thickness shall be an eight (8") inch minimum.

4. Handicap Ramps

In all subdivisions where sidewalks, curbs or gutters are required, handicap ramps shall be installed at all crosswalks so as to make the transition from street to sidewalk easily negotiable for physically handicapped persons in wheelchairs

and for others who may have difficulty in making the step up or down from curb level to street level. This requirement is not subject to waiver.

5. Quality of Concrete

All sidewalks, curbs gutters, handicap ramps and driveway aprons shall be constructed of high quality durable portland cement concrete. The concrete shall be read-mixed, air entrained, 4,000 lb. concrete. All concrete shall be Class A and shall be placed, curbed and tested in accordance with the Technical Specifications, Section 03001.

6. Waiver For Installation of Sidewalks

The Planning Commission may upon application of the subdivision developer may waive the requirements for sidewalk in residential areas. Such waivers shall be granted only under the following conditions provided that the safety of pedestrians and children is not a factor.

a. Where a park, railroad, or other use on one side of a street makes a sidewalk non-essential.

b. Where ninety percent (90%) of the lots in residential subdivision exceed an area of one (1) acre, the requirement for sidewalks may be waived.

c. Within Residential Planned Unit Developments sidewalks may be waived upon Planning Commission approval.

I. Installation of Utilities and Sanitary Sewers

After roadway grading is completed and approved and before any base course is applied, all of the underground work on water mains, sewers, etc., and all service connections shall be installed completely and approved throughout the length of the roadway and across the width of the roadway.

1. Water Supply System (Refer to Millington Technical Specifications, Design Criteria Section 100 and Site work, Section 2722).

a. Water mains in the subdivision shall be connected to the city water system. The water system in the subdivision will be looped if possible so as to provide adequate water pressure for fire protection. The water mains will be a minimum eight (8) inches with fire hydrants no further apart than five hundred (500) feet. A greater line size may be required when it is determined that future development will require the addition size.

b. All water mains installed within the subdivision shall be designed to minimize the infiltration of flood water.

c. The developer shall be responsible for installing individual lot services to property line consisting of connection to main, service tubing, curb stop and meter box. All Water Service location shall be marked with a "W" chiseled and painted on the face of curb.

d. All water supply system construction plans and specifications shall be approved by the area office of the Tennessee Department of Public Health, Environmental Health Services, prior to any construction in accordance with Section 68-13-102, Tennessee Code Annotated, copies of comments and certificates of approval from the above agency shall be forwarded to the City of Millington. The construction will be inspected by the City Engineer for compliance with the approved plans.

2. Sanitary Sewer System (Refer to Millington Technical Specifications, Design Criteria, Section 200 and Sitework Section 2722.)

a. Sanitary sewers shall be installed by the developer. Sewer lines shall be a minimum of 8" diameter for gravity lines and a minimum 4" for force mains. The Planning Commission may require greater line sizes, pumping stations or other design

modifications upon recommendation by the planning staff and/or City Engineer. The sewer system will connect into the city system. All subdivisions within the city limits will be required to connect to the system at their expense. All systems shall be designed to minimize or eliminate infiltration of, or discharge into flood water.

b. The developer shall be responsible for installing individual lot services to property line consisting of connection to main and service pipe with plug. All sewer services locations shall be marked with a "S" chiseled and painted on the face of the curb. The service pipe will be a 6" minimum per the technical specifications.

Sewer service lines shall be required to be located no deeper than 5 feet below the surface at the property line with the exact location of the end of the line staked and flagged. Service lines when installed up to 45 degrees from horizontal shall be laid on well compacted Class I granular material. When service lines are installed at an angle greater than 45 degrees from the horizontal service lines shall be encased in concrete per Section 210 of the technical standards.

c. All sewer line construction plans and specifications shall be approved by the area office of the Tennessee Department of Public Health, Environmental Health Services, prior to any construction in accordance with Section 68-13-102, Tennessee Code Annotated. Copies of comments and certificates of approval from the above agency shall be forwarded to the City of Millington. The construction will be inspected by the City Engineer for the compliance with the approved plans.

J. Screening and Landscaping

Where required by the Planning Commission and these regulations, fences and vegetative screening and landscaping shall be provided along the perimeter of certain developments to protect residential districts from undesirable views, lighting, noise and other adverse influences. Other landscaping may be required for open space reserved

as a part of the storm drainage system, for recreational areas, and for erosion control and preservation of environment and of historical landmarks.

1. Residential Development

Where residential development has lots which have double frontage on public streets (alleys excepted) there shall be continuous screening along the rear line of these lots. Visibility areas required for traffic safety as designated by the City Engineer shall not be screened.

2. Non-Residential Development

The screening and landscaping for non-residential development shall comply with the provisions of the City of Millington Zoning Ordinance.

3. Other Landscaping

The Planning Commission may specify to the developer those areas within the subdivision which require landscaping. The developer shall present for Planning Commission approval a detailed landscaping plan and planting schedule.

K. Technical Specifications Included by Reference

The technical specifications of the City of Millington as set forth in the Appendix, are included in all of the foregoing requirements of this Article and these regulations by reference. Unless these regulations state otherwise, deviations form the Technical Specifications may be allowed only with the prior approval of the City Engineer, and Planning Commission. The standards for the design of the drainage in subsections are contained in the City of Millington Drainage Design Manual.

L. Performance Bond in Lieu of Completed Improvements

The Subdivision Developer shall subject to the Planning Commission's approval, furnish to the City of Millington construction performance bond. The amount and terms of the bond shall be as determined by the City Engineer and approved by the Planning Commission in accordance with Section 13-4-303, Tennessee Code Annotated. If all required construction is not completed within one year the bond will be reviewed for adequacy and increased if necessary. The legal document establishing the bond will be reviewed by the City Attorney.

1. Reduction of Bond Upon Partial Completion

Upon completion of the major improvements, and upon final inspection and acceptance by the City Engineer, the developer may request the reduction of the amount of the performance bond or he may substitute a new bond to secure the obligation with respect to uncompleted or unaccepted improvements. The residual improvements shall normally be limited to such items as erosion control, revegetation, landscaping and plantings, and to those improvements such as sidewalks, handicap ramps, and curb cuts and driveway aprons which are deferred pending completion of building construction in those instances where the developer is also the builder.

2. Enforcement of Bonds

Failure of the developer to comply with any or all parts of these regulations subsequent to final subdivision plat approval shall be grounds for issuance of a stop work order by the City Engineer or Building Inspector and enforcement of the performance bond by the City of Millington.

M. Issuance of Building Permits and Certificates of Occupancy

1. Where a performance bond has been required for a subdivision, no certificate of occupancy for any building in the subdivision shall be issued prior to the completion of the improvements and dedication of same to the local government as required in the Planning Commission's final approval of the subdivision plat.

2. The extent of street improvement shall be adequate for vehicular access by the prospective occupant and by police and fire equipment, prior to the issuance of an occupancy permit. The developer shall at the time of the dedication submit monies in escrow to the local government in a sum determined by the local government engineer for the necessary final improvement of the street.

3. No building permit shall be issued for the final ten percent (10%) of lots in a subdivision, or if ten percent (10%) be less than two (2), for the final two (2) lots of a subdivision, until all public improvements required by the Planning Commission for the plat have been fully completed and dedicated to the local government.

N. Acceptance of and Warranty Period for Improvements

The City of Millington, upon final approval and acceptance, will take full title to the improvements and will provide maintenance, thereafter, except that the developer will be responsible for construction failures and defects in the subdivision for one (1) year after the final acceptance of the subdivision construction. During this period, it shall be the responsibility of the developer to correct and cure these defects and failures. The subdivision performance bond or financial surety will not be released until the warranty period and all required repair work is completed.

ARTICLE V VARIANCES, APPEALS AND AMENDMENTS

A. Variances

Variances to the general requirements, design standards and extent of improvements required by these regulations may be granted or imposed by the Planning Commission. All requests for variances shall be submitted in writing. The Planning Commission may grant or impose variances under the following conditions:

1. Hardship

Where it can be shown that strict adherence to the provisions of these regulations would cause unnecessary hardship, a variance may be granted, except that, in no case shall this be construed to permit subdivision of land which is unsuitable or otherwise inadequate for the intended use, nor to permit waiver of any requirements which are necessary to the protection of life or property.

2. Site Peculiar Conditions

Where the Planning Commission determines that the topography or other site peculiar conditions warrant, and departure from these regulations would not destroy their intent, a variance may be granted or required. In this regard, the Planning Commission may impose additional requirements and higher standards to cope with peculiar conditions. Any variance thus authorized shall be stated in writing in the minutes of the Planning Commission with the reasons justifying the variances.

B. Appeals

For matters falling within the scope of the regulating powers granted to the Planning Commission by Sections 13-4-302 and 13-4-303, Tennessee Code Annotated, any person or persons, or any board, taxpayer, department, board or bureau of the City aggrieved by any decision, finding or interpretation of the Planning Commission may seek review by a court of record of such decision, finding or

interpretation, in the manner provided by the laws of the State of Tennessee. Decisions, findings and interpretations of the Planning Commission with regard to the standards and extent of improvements required for subdivision approval shall in all instances be final administrative decisions. Other appeals shall be as follows:

1. Board of Mayor and Aldermen

   Matters submitted to the Planning Commission pertaining to the widening, narrowing, relocation, vacation, change in use, acceptance, acquisition, sale or lease of any street or public way, place or property may upon disapproval by the Planning Commission be overruled by the Board of Mayor and Aldermen by a majority vote of its membership.

C. Amendments

The procedures, policies, design standards, requirements, and restrictions set forth in these Regulations may from time to time be amended, supplemented, changed, or rescinded by the Planning Commission. Before adoption of any amendment, a public hearing thereon shall be held by the Planning Commission in accordance with Section 13-4-303, Tennessee Code Annotated. At least thirty (30) days notice of the time and place of such hearing shall be published in a newspaper of general circulation in the city.

ARTICLE VI LEGAL STATUS PROVISIONS

A. Powers of the Planning Commission

These regulations are in accordance with the provisions of Chapter 4, Title 13, Tennessee Code Annotated, which grants to the Planning Commission the powers to regulate the subdivision of land within the City of Millington. In accordance with Section 13-4-103, Tennessee Code Annotated, the Planning Commission, its members and employees, in the performance of its work, may enter upon any land and make examinations and surveys and place and maintain necessary monuments and marks thereon. The code further provides that, in general, the Planning Commission shall have powers as may be necessary to enable it to perform its purposes and to promote municipal planning.

B. Enforcement of Subdivision Regulations

The enforcement of these regulations is provided for by State law in the authority granted by public acts of the State of Tennessee.

1. Submission of Subdivision Plat for Approval

No plat of a subdivision of land into two (2) or more lots or tracts located within the City of Millington shall be admitted to the land records of Shelby County or received or recorded by the County Register of Deeds until such plat shall have been submitted to and approved by the Planning Commission and such approval entered in writing on the plat by the Secretary of the Commission as provided in Section 13-4-302, Tennessee Code Annotated.

2. Acceptance of and Improvements of Unapproved Streets

No board, public official, or authority shall accept, lay out, open, improve, grade, pave or light any street or lay or authorize water mains or sewers or connection to be laid in any street within the City of Millington unless such shall have otherwise received the legal status of a public street prior to adoption of these

regulations, or unless such street corresponds in its location and lines to a street shown on a subdivision plat approved by the Planning Commission as provided in Section 13-4-307, Tennessee Code Annotated, however, the Board of Mayor and Aldermen may locate and construct or may accept any other street, provided that the Ordinance or other measure for such location and construction or for such acceptance be first submitted to the Planning Commission for its approval, and if disapproved by the Commission, be passed by a majority of the entire membership of the Board of Mayor and Aldermen; and a street approved by the Planning Commission or constructed or accepted by said majority vote after disapproval by the Commission, shall have the status of an approved street as fully as though it had been originally shown on a subdivision plat approved by the Commission or on a plat made and adopted by the Commission.

3. Issuance of Building Permits

No building permit shall be issued and no building shall be erected on any lot within the City of Millington, unless the street giving access to the lot upon which said building is proposed to be placed shall have been accepted or open as, or shall have otherwise received the legal status of a public street prior to the adoption of these regulations or unless such street corresponds in its location and lines with a street shown on a subdivision plat approved by the Planning Commission or on a street plat made and adopted by the Commission, or with a street located or accepted by the Board of Mayor and Aldermen as provided in Section 13-4-308, Tennessee Code Annotated. A building permit may be issued on a lot shown on a subdivision plat, approved by the Planning Commission, provided that the roadbed base has been applied and the subdivision development is substantially complete.

B. Complaints Regarding Violations

Whenever a violation of these regulations occurs, or is alleged to have occurred, any person may file a written complaint stating fully the

causes and basis thereof. Such complaint shall be filed with the Building Inspector. He shall record properly such complaint, investigate, take necessary action within his authority or refer the complaint to the City Attorney or other official designated by the Board of Mayor and Aldermen. A report of all violations of these regulations and action taken shall be included in the minutes of a regular meeting of the Planning Commission.

D. Penalties for Violations

The penalties for the filing or recording of a plat, transfer or sale of land, and erected of a building, in violation of these regulations, are provided for by State law in authority granted by Public Acts of the State of Tennessee.

1. Recording of Unapproved Subdivision Plat

No County Register shall receive, file, or record a plat of a subdivision within the City of Millington without the approval of the Planning Commission as required in Section 13-4-302, Tennessee Code Annotated, and any County Register so doing shall be deemed guilty of a misdemeanor, punishable as other misdemeanors as provided by law.

2. Transfer or Sale of Land Without Prior Subdivision Approval

Section 13-4-306, Tennessee Code Annotated, provides that whoever being the owner or agent of the owner of any land, transfers or sells or agrees to sell or negotiates to sell such land by reference to or exhibition of or by other use of a plat of such subdivision or such land without having submitted a plat of such subdivision to the Planning Commission and obtained its approval as required before such plat be recorded in the Office of the Shelby County Register, shall be deemed guilty of a misdemeanor punishable as other misdemeanors as provided by law; and the description by Metes and Bounds in the instrument of transfer or other document used in the process of selling or transferring shall not exempt the transaction from such penalties. The City of Millington through its City Attorney or other official

designated by the Board of Mayor and Aldermen may enjoin such transfer or sale or agreement by action or injunction.

3. Unlawful Structures

Any building erected or to be erected in violation of these regulations shall be deemed an unlawful structure, and the Building Inspector or the City Attorney of the City of Millington or other official designated by the Board of Mayor and Aldermen may bring action to enjoin such erection or cause it to be vacated or removed as provided in Section 13-4-308, Tennessee Code Annotated.

E. Provisions of Regulations Declared to be Minimum Requirements

In their interpretation and application, the provisions of these regulations shall be held to be minimum requirements, adopted for the public interest and orderly development of the City of Millington. Whenever the requirements of these regulations are at variance with the requirements of any other lawfully adopted rules, regulations, ordinances, or deed restrictions, the most restrictive, or that imposing the higher standards shall govern.

ARTICLE VII. SEVERABILITY

Should any section or provision of these Subdivision Regulations be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Regulations as a whole, or any part, thereof, other than the part so declared to be unconstitutional or invalid.

ARTICLE VIII. ADOPTED AND EFFECTIVE DATE

A. Public Hearing

Before adoption, amendment, revisions, or rescission of all or part of these Subdivision Regulations a Public Hearing as required by Section 13-4-303, Tennessee Code Annotated, was afforded any interested person or persons.

B. Effective Date

The attachment of the Planning Commission's Subdivision jurisdiction and these Subdivision Regulations shall be in full force and effect from and after their adoption and effective date. The effective date of any amendment, revision or rescission of these Subdivision Regulations shall be the date such amendments, revision or rescission shall have been adopted by the Planning Commission.

Adopted by the Planning Commission on the 30th day of April, 1987.

FINAL PLAT CERTIFICATES

Certificate of Survey

I, ____(printed name of signer)_____, do hereby certify that I am a registered (Professional Civil Engineer) (Land Surveyor), and that I have surveyed the lands, embraced within the plat or map designated as _____, a subdivision all lying within the corporate limits of the City of Millington, Tennessee; said plat or map is a true and correct plat or map of the lands embraced therein, showing the subdivision thereof in accordance with the Subdivision Regulations of the City of Millington, Tennessee; I further certify that the survey of the lands embraced within said plat or map has been correctly monumented in accordance with the Subdivision Regulations of the City of Millington, Tennessee.

In witness whereof, I, the Said (printed name of surveyor), (Professional Civil Engineer) (Land Surveyor), hereunto set out hand and affix my seal the ____ day of _____, _____.

_____
Professional Civil Engineer
Land Surveyor,
State of Tennessee
Certificate No. _____ (SEAL)

CERTIFICATE OF ADEQUACY OF STORM DRAINAGE

I, (printed name of signer), do hereby certify that I am a registered Professional Civil Engineer, and that I have designed all storm water drainage for the _____ subdivision to assure that neither said subdivision nor adjoining property will be damaged or the character of land use affected by the velocity and volume of water entering or leaving same. In witness whereof, I, the said (printed name of signer), Professional Civil Engineer, hereunto set out hand and affix my seal this _____ day of _____, ____.

_____
Professional Civil Engineer
State of Tennessee
Certificate No. _____ (SEAL)

CERTIFICATE OF APPROVAL OF SUITABILITY OF SOILS FOR SEPTIC TANKS

I, ____(printed name of signer)_____, do hereby certify that the soils on and below the surface of the land shown on this plat are suitable for the use of septic tanks. This certification is not to be construed as a septic tank installation permit. Septic tank installation shall require a site plan and a permit approved by the Shelby County Health Department. After the suitability of any area to be used for subsurface sewerage disposal has been approved, no change shall be made to this area unless the Shelby County Health Department is notified and a reevaluation of the area's suitability is made prior to the initiation of construction.

_____, ____
Date

_____
Shelby County Health Department

CERTIFICATE OF ACCURACY OF ENGINEERING AND DESIGN

I, (printed name of signer), a Professional Civil Engineer, do hereby certify that the plans, engineering and designs governing the construction of the subdivision are true and correct, and conform to the requirements set forth in the Subdivision Regulations and Technical Specifications of the City of Millington.

_____, ____
Date

_____
Professional Civil Engineer
State of Tennessee
Certificate No._____

CERTIFICATE OF APPROVAL OF WATER AND SEWER LINES AND DRAINAGE SYSTEM

I, ____(printed name of signer)_____, do hereby certify that the plans regarding drainage systems and water and sewer layout meet the requirements of the Subdivision Regulations and technical specifications of the City of Millington and are hereby approved.

_____, _____
Date

_____
City Engineer

CERTIFICATE OF APPROVAL OF WATER AND SEWAGE SYSTEMS

I, ____(printed name of signer)_____, do hereby certify that a set of construction plans regarding the water supply and/or sanitary sewers bearing the seal of the Tennessee Department of Public Health which indicates said plans meet the Department's requirements have been received.

_____, _____
Date

_____
Superintendent of Water and Sewer

CERTIFICATION OF THE APPROVAL OF STREETS AND UTILITIES

I hereby certify: (1) that streets, utilities and drainage treatments have been installed in an acceptable manner and according to specifications, or (2) that a guarantee has been posted with the Planning Commission to assure completion of all required improvements in case of default.

_____, 19____
Date

_____
City Engineer

PLANNING COMMISSION CERTIFICATE

I, ____(printed name of signer)_____, do hereby certify that the City of Millington Planning Commission has approved this plat of subdivision for recording.

_____, _____
Date

_____
Secretary, City of Millington
Planning Commission

OWNER'S CERTIFICATE

I, ____(printed name of signer)_____, the undersigned owner of the property shown hereon, hereby adopt this as my plan of subdivision and dedicate the streets, easements, rights-of-way, rights of access as shown and all utilities to the City of Millington forever, and hereby certify that I am the owner in fee simple, duly authorized so to act, and that said property is unencumbered by any taxes that have become due and payable.

_____

Owner

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, the undersigned, a notary public in and for the State and County aforesaid, duly commissioned and qualified, personally appeared (printed name of owner) with whom I am personally acquainted and who, upon oath, acknowledge himself to be the owner of the (printed name of subdivision) and he as such owner, executed the foregoing instrument for the purpose therein contained by signing his name as owner.

In witness whereof, I hereunto set my hand and affix my seal this _____ day of _____, _____.

Notary Public_____

My commission expires_____

MORTGAGEE CERTIFICATE

We, the undersigned, (printed name of mortgagee), Mortgagee of the property shown hereon, hereby adopt this plat as our plan of subdivision and dedicate the streets, rights-of-way, utilities, easements, and rights of access as shown to the City of Millington forever and hereby certify that we are the mortgagee duly authorized so to act and that said property is unencumbered by any taxes which have become due and payable.

_____

Signature of Mortgagee

STATE OF TENNESSEE
COUNTY OF SHELBY

Before me, the undersigned a notary public in and for the State and County aforesaid, duly commissioned and qualified personally appeared (printed name) of (printed name of subdivision) and he as such representative executed the foregoing instrument for the purpose therein contained by signing his name as representative of the mortgagee.

In witness whereof, I hereunto set out hand and affix my seal this ____ day of _____, _____.

Notary Public_____

My Commission expires: _____

SUPPLEMENT NO. 1
to
LOCAL GOVERNMENT PUBLIC WORKS STANDARDS AND SPECIFICATION
FOR
SUBDIVISION DEVELOPMENT
CITY OF MILLINGTON, TENNESSEE

I. GENERAL

The requirements as contained in the City of Millington Subdivision Regulations shall be adhered to in conjunction with the Local Government Public Works Standards and Specifications as amended by this supplement. Where discrepancies between these documents exist the Subdivision Regulations shall govern. The provisions set forth in this supplement shall apply only to subdivision development within Millington and shall not be considered as applying to other types of construction activities.

II. DEFINITIONS

For the purposes of these standards and in order to carry out the provisions and intentions as set forth herein, certain words, terms, and phrases are to be used and interpreted as defined hereinafter.

Contractor: An individual, partnership, corporation or other legal entity or agent thereof which undertakes the activities covered by the City of Millington Subdivision Regulations.

Engineer: The City Engineer of Millington, Tennessee.

Owner: The owner of the property being subdivided or his legal agent.

III. DELETIONS AND REVISION

A. Construction Standards

1. Division 1 - General Requirements, delete all sections in their entirety.

2. Division 2 - Site work

   a. Section 02050 - Demolition, delete in its entirety

   b. Section 02110 - Clearing and Grubbing, delete in its entirety.

   c. Section 02210 - Grading and Excavation

      (1) Delete part 1.02
      (2) Delete part 3.05

   d. Section 02215 - Base and Subgrade Treatment

      (1) Delete part 1.02.A
      (2) Change 3.07 Compacting Aggregate - Bases Part A, "Square Yards" change to "Square feet".

      (3) Delete parts 3.09, 3.10, and 3.11.

   e. Section 2221, Trenching, Backfilling and Compaction

      (1) Delete part 1.02.A

      (2) Change Part 3.10 B.2. (bedding for PVC, UCP and RCP sewers.) The text should read, "For PVC sewer pipe, if allowed, Use class I angular materials.

      (3) Delete Parts 3.14, 3.15 and 3.16.

f. Section 02260 "Slope Protection and Erosion Control" (Text following in Section IV)

g. Section 02271 Rip-Rap

(1) Delete part 1.02.A
(2) Delete part 3.05

h. Section 02305 Boring and Jacking

(1) Delete part 3.03

i. Section 02444 - Chain Link Fences and Gates, delete in its entirety.

j. Section 02451 - Guardrails, delete in its entirety.

k. Section 02452 - Highway Signs, delete in its entirety.

l. Section 02485 - Lawn and Grass Landscaping
(1) Delete part 3.05

m. Section 02513 - Asphaltic Concrete Paving
(1) Delete part 1.02.A
(2) Delete parts 2.09, 2.10, and 2.11.
(3) Change the titles for parts 3.04 and 3.05 by deleting "and cold mix".
(4) Delete parts 3.08, 3.09 and 3.13.

n. Section 2515 - Portland Cement Concrete Paving
(1) Delete part 1.02.A
(2) Delete part 3.10

o. Section 02528 - Concrete Curbs, Gutters and Sidewalks
(1) Delete part 1.02.A
(2) Delete parts 3.07 and 3.08.

p. Section 2577 - Pavement Marking, delete in its entirety

q. Section 2605 - Separation of Piped Utilities
(1) Replace Subsection 3.01.B.1 with the following text:

Whenever possible, sewers should be laid at least 10 feet horizontally, from any existing or proposed water main. The distance should be measured edge to edge. Should local conditions prevent a lateral separation of 10 feet, a sewer may be laid closer than 10 feet to a water main if it is laid in a separate trench and if the elevation of the top (crown) of the sewer is at least 18 inches below the bottom (invert) of the water main.

(2) Replace Subsection 3.01.B.2 of the above section with the following text:

When it is impossible to obtain proper horizontal separation as stipulated above, the sewer shall be designed and constructed equal to the water main pipe and shall be pressure-tested to assure water tightness (see drinking water criteria). Such arrangements are discouraged and adequate reasons shall be provided to justify the design.

(3) Replace subsection 3.02.B.1 with the following text:

Whenever sewers must cross under water mains, the sewer shall be laid at such elevation that the top of the sewer is at least 18 inches below the bottom of the water main. When the elevation of the sewer cannot be varied to meet the above requirement, the water main shall be relocated to provide this separation or reconstructed with mechanical - joint pipe for a distance of 10 feet on each side of the sewer. One full length of water

main should be centered over the sewer so that both joints will be as far from the sewer as possible.

(4) Add a new subpart 3.02.B.2 with the following text:

When it is impossible to obtain proper vertical separation as stipulated above, the sewer shall be designed and constructed equal to the water main pipe and shall be pressure-tested to assure water-tightness (see drinking water criteria). Such arrangements are discouraged and adequate reason shall be provided to justify the design.

r. Section 02713 - Water Distribution Systems

(1) Change Part 2.01.A by adding "PVC pipe used only in special cases with prior approval".

(2) Delete Part 2.03.A Polyethylene Service pipe.

3) Change Part 2.03.B.5 by changing "meter yoke" to "meter stop".

(4) Change Part 2.04.A Water meters by deleting 1 through 7 and adding "to be provided by city" to text of 2.04.A.

(5) Delete Part 2.04.D

(6) Change Part 2.04.F by adding the text "to be provided by the city" and deleting 1) through 5).

(7) Change Part 2.07 (Fire Hydrants and Blow-off hydrants) subpart A-Fire Hydrants by deleting 1 through 12 and replacing it with the following text:

1. Fire hydrants shall be M/H or Mueller (no substitutes, must match existing hydrants) standard compression type conforming to the AWWA Specification C502, complete with: 5" minimum valve opening; 6" AWWA Specification C 111 mechanical joint inlet connection; 3-foot bury; two 2 1/2" National standard fire hose thread nozzles; one 4" CITY OF MEMPHIS, TENNESSEE STANDARD pumper connection nozzle; 1 1/2" point-to-flat pentagon operating nut and cap nuts; and COUNTER-CLOCKWISE direction of opening. See OFFICIAL FIRE HYDRANT, MILLINGTON, TENNESSEE drawing.

2. All interior working parts of the hydrant shall be solid bronze or bronze mounted. The hydrant shall be so designed that all interior parts can be removed without removing the stand pipe from its set position. Each hydrant shall be equipped with a drip valve that will positively drain the standpipe when the main valve is closed. Submit cutaway view drawings prior to the purchasing of hydrants.

3. All nozzles shall be equipped with caps anchored to the standpipe with chains.

4. Each hydrant shall be factory painted on the outside below grade line with black asphalt paint, and above grade line with red paint. After setting, paint all parts of the hydrant above grade line as specified hereinafter.

(8) Change Subpart 2.07 B.8 by deleting the text "unless otherwise specified."

(9) Add a new subpart G to subpart 3.02 with the following text:

State approved reduced pressure backflow prevention devices are required on all potable water mains serving the wastewater treatment plant or lift station. A list of approved backflow preventers may be obtained from the Water Supply Division.

(10) Delete parts 3.04, 3.10 and 3.11.

s. Section 02721 Storm Drainage Systems:

(1) Delete Parts 3.07 and 3.08.

t. Section 02722 Sanitary Sewer Systems

(1) Add to the title of 2.03 Polyvinyl Chloride Pipe and Fittings the text: "(can be used only with prior approval)".

(2) Change "used" to "allowed" in subpart 2.09.B and 3.04.E.

(3) Replace 3.04.c with the following text:

c. If there is evidence of infiltration, make measurement with suitable pipe weirs:

(1) If the flow through the lower most manhole of a continuous section of sewer does not exceed 50 gallons day/inch/mile of pipeline and the groundwater level is representative of the highest annual level, the entire continuous section shall be approved for leakage.

(2) The leakage test will be conducted with all lines connected (including service line).

(3) If the apparent infiltration rate exceed 50 gallon/day/inch/mile, then take additional weir measurements to isolate those sections leaking.

(4) Any single reach of pipeline which exhibits an apparent infiltration rate in excess of 50 gallon/day/inch/mile will not be accepted and all leaks will be located and corrected.

(4) Change Subpart 3.06.D to read: The first sections of pipe entering and leaving the manhole shall be ductile iron, concrete, PUC or UCP.

(5) Delete Parts 3.13, 3.14, 3.15, 3.16, 3.17, 3.18 and 3.19.

3. Division 3 Concrete

A. Section 03001 concrete work

(1) Delete Part 1.02.A

(2) Change Part 201.B by adding: chert or river rock may not be used as a course aggregate.

(3) Change Part 2.12 by correcting typographical error. "2 Dia Bar" should be just "2".

(4) Delete part 3.12.

4. Division 16 Electrical

Delete all sections in their entirety.

B. Design Criteria

1. Section 100 Water Distribution Systems

a. Add text to Part 104.3.1 which says "PVC pipe can be used only with prior approval of the Director of Water and Sewer".

b. Change part 104.4 "other water pipe materials" by removing "Asbestos - Cement".

c. Change Part 107.1 by including at the end of the present paragraph "One (1) set of TDPH-WQC approval plans shall be furnished to the Water Department and one (1) set of same to be furnished to the contractor and to be kept on the job during construction.

d. Drawings FHA-1, BHA-1 and WSA-1 to Millington Standards

2. Section 200 Wastewater Systems

a. 204.7 Pipe Materials Selection

b. 204.8 Pipeline Bedding
Flexible Pipe
Change from "flexible pipe" to "flexible connections, where allowed".

c. 205.5 Base Construction
Change from "flexible connection" to "flexible pipe, where allowed".

d. 206 Installation and Acceptance Testing
change from "Non-rigid pipe" to "Non-rigid pipe, where allowed".

3. Section 300 Drainage Systems - No changes.

4. Section 400 Drainage Systems - No changes.

IV. New Text to be Added

SECTION 02260 SLOPE PROTECTION AND EROSION CONTROL

Part 1: General

1.01 Description

A. This Section shall consist of temporary control measures as shown in the Plans and as directed by the City Engineer during the subdivision construction period to control erosion and water pollution through the use of berms, dikes, dams, sediment basins, fiber mats, netting, mulches, grasses, slope drains, temporary silt fences, and other control devices.

B. The temporary pollution control provisions contained herein shall be coordinated with the permanent erosion control features, to assure economical, effective, and continuous erosion control throughout the construction and post-construction period.

Part 2: Materials

2.01 Temporary Berms:

A. A temporary berm is constructed of compacted soil, with or without a shallow ditch, at the top of fill slopes or transverse to centerline on fills.

B. These berms are used temporarily at the top of newly constructed slopes to prevent excessive erosion until permanent controls are installed or slopes stabilized.

2.02 Temporary Drains:

A temporary slope drain is a facility consisting of stone gutters, fiber mats, plastic sheets, concrete or asphalt gutters, half-round pipe, metal pipe, plastic pipe, sod or other material acceptable to the City Engineer that may be used to carry water down slopes to reduce erosion.

2.03 Sediment Structures:

Sediment basins, ponds, and traps, are prepared storage areas constructed to trap and store sediment from erodible areas in order to protect properties and stream channels below the construction areas from excessive siltation.

2.04 Check Dams:

A. Check dams are barriers composed of logs and poles, large stones or other materials placed across a natural or constructed drainway.

B. Stone check dams shall not be utilized where the drainage areas exceeds fifty (50) acres. Log and pole structures shall not be used where the drainage area exceeds five (5) acres.

2.05 Temporary Seeding and Mulching:

Temporary seeding and mulching are measures consisting of seeding, mulching, fertilizing, and matting utilized to reduce erosion. All cut and fill slopes including waste sites and borrow pits shall be seeded when and where necessary to eliminate erosion.

2.06 Brush Barriers:

A. Brush barriers shall consist of brush, tree trimmings, shrubs, plants, and other approved refuse from the clearing and grubbing operations.

B. Brush barriers are placed on natural ground at the bottom of fill slopes, where the most likely erodible areas are located to restrain sedimentation particles.

2.07 Baled Hay or Straw Check:

A. Baled hay or straw erosion checks are temporary measures to control erosion and prevent siltation. Bales shall be either hay or straw containing five (5) cubic feet or more of material.

B. Baled hay or straw checks shall be used where the existing ground slopes toward or away from the embankment along the toe of slopes, in ditches, or other areas where siltation erosion or water run-off is a problem.

C.

2.08 Temporary Silt Fences:

Silt fences are temporary measures utilizing woven wire or other approved material attached to posts with filter cloth composed of burlap, plastic filter fabric, etc., attached to the upstream side of the fence to retain the suspended silt particles in the run-off water.

Part 3: Execution

3.01 Project Review:

Prior to the pre-construction conference, the Contractor shall meet with the City Engineer and go over in detail the expected problem areas in regard to the erosion control work. Different solutions should be discussed so that the best method might be determined. It is the basic responsibility of the Contractor to develop an erosion control plan acceptable to the City Engineer.

3.02 Pre-Construction Conference:

At the pre-construction conference, the Contractor shall submit for acceptance his schedule for accomplishment of temporary and permanent erosion control work, as are applicable for clearing and grubbing, grading, bridges and other structures at watercourses, construction, and paving. He shall also submit for acceptance his proposed method of erosion control on haul roads and borrow pits and his plan for disposal of waste materials. No work shall be started until the erosion control schedules and methods of operations have been accepted by the City Engineer.

3.03. Construction Requirements:

A. The City Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, the surface of erodible earth materials exposed by excavation, borrow and fill operations and to direct the Contractor to provide immediate permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, or other water impoundment. Such work may involve the construction of temporary berms, dikes, dams, sediment basins, slope drains, and use of temporary mulches, mats, seeding or other control devices or methods as necessary to control erosion. Cut and fill slopes shall be seeded and mulched as the excavation proceeds to the extent directed by the City Engineer .

B. The Contractor shall be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in his accepted schedule. Temporary pollution control measures shall be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent pollution control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

C. Where erosion is likely to be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately thereafter if the project conditions permit; otherwise erosion control measures may be required between successive construction stages. Under no conditions shall the surface area of erodible earth material exposed at one time by clearing and grubbing, exceed 750,000 square feet without approval of the City Engineer .

D. The City Engineer will limit the area of excavation, borrow, and embankment operations in progress commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent pollution control measures current in accordance with the accepted schedule. Should seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified.

E. Under no conditions shall the amount of surface area or erodible earth material exposed at one time by excavation or fill within the project area exceed 750,000 square feet without prior approval by the City Engineer.

F. The City Engineer may increase or decrease the amount of surface area or erodible earth material to be exposed at one time by clearing and grubbing, excavation, borrow and fill operations as determined by his analysis of project conditions.

G. In the event of conflict between these requirements and pollution control laws, rules or regulations, or other Federal, State or Local agencies, the more restrictive laws, rules or regulations shall apply.

3.04 Construction of Structures

A. Temporary Berms:

A temporary berm shall be constructed of compacted soil, with a minimum width of 24 inches at the top and a minimum height of 12 inches with or without a shallow ditch, constructed at the top of fill slopes or transverse to centerline on fills. Temporary berms shall be graded so as to drain to a compacted outlet at a slope drain. The area adjacent to the temporary berm in the vicinity of the slope drain must be properly graded to enable this inlet to function efficiently and with minimum ponding in this area. All transverse berms required on the downstream side of a slope drain shall extend across the grade to the highest point at approximately a 10-degree angle with a perpendicular to centerline. The top width of these berms may be wider and the side slope flatter on transverse berms to allow equipment to pass over these berms with minimum disruptions. When practical and until final roadway elevations are approached, embankments should be constructed with gradual slope to one side of the embankment to permit the placement of temporary berms and slope drains on only one side of the embankment.

B. Temporary Slope Drains:

1.) Temporary slope drains shall consist of stone gutters, fiber mats, plastic sheets, concrete or asphalt gutters, half-round pipe, metal pipe, plastic pipe, flexible rubber, or other materials which can be used as temporary measures to carry water accumulating in the cuts and on the fills down the slopes prior to installation of permanent facilities or growth of adequate ground cover on the slopes.

2.) Fiber matting and plastic sheeting shall not be used on slopes steeper than 4:1 except for short distances or 20 feet or less.

3.) All temporary slope drains shall be adequately anchored to the slope to prevent disruption by the force of the water flowing in the drains. The base for temporary slope drains shall be compacted and concavely formed to channel the water or hold the slope drain in place. The inlet end shall

be properly constructed to channel water into the temporary slope drain. Energy dissipaters, sediment basins, or other approved devices shall be constructed at the outlet end of the slope drains to reduce erosion downstream. An ideal dissipater would be dumped rock or a small sediment basin which would slow the water as well as pick up some sediment. All temporary slope drains shall be removed when no longer necessary and the site restored to match the surroundings.

C. Sediment Structures:

1.) Sediment structures shall be utilized to control sediment at the foot of embankments where slope drains outlet; at the bottom as well as the ditchlines atop waste sites; in the ditchlines or borrow pits. Sediment structures may be used in most drainage situations to prevent excessive siltation of pipe structures. All sediment structures shall be at least twice as long as they are wide.

2.) When use of temporary sediment structures is to be discontinued, all sediment accumulation shall be removed, and all excavation backfilled and properly compacted. The existing ground shall be restored to its natural or intended condition.

D. Check Dams:

1.) Check dams shall be utilized to retard stream flow and catch small sediment loads. Materials utilized to construct check dams are varied and should be clearly illustrated or explained in the contractor's erosion control plan.

2.) All check dams shall be keyed into the side and bottom of the channel a minimum depth of two (2) feet. A design is

not needed for check dams, but some typical designs are shown in the standard plans.

3.) Stone check dams should generally not be utilized where the drainage area exceeds fifty (50) acres. Log and pole structures should generally not be used where the drainage area exceeds five (5) acres.

E. Brush Barriers:

Brush Barriers shall consist of brush, tree trimmings, shrubs, plants and other approved refuse from the clearing and grubbing operations. The brush barriers shall be constructed approximately parallel to original ground contour. The brush barrier shall be compressed to an approximately height of 3 to 5 feet and approximate width of 5 to 10 feet. The embankment shall not be supported by the construction of brush barriers.

F. Baled Hay or Straw Erosion Checks:

Hay or straw erosion checks shall be embedded in the ground 4 to 6 inches to prevent water flowing under them. The bales shall also be anchored securely to the ground by wooden stakes driven through the bales into the ground. Bales can remain in place until they rot, or be removed after they have served their purpose, as determined by the City Engineer. The contractor shall keep the checks in good condition by replacing broken or damaged bales immediately after damage occurs. Normal debris clean-out will be considered routine maintenance.

G. Temporary Silt Fences:

1.) Temporary silt fences shall be placed on the natural ground, at the bottom of fill slopes, in ditches, or other areas where siltation is a problem. Silt fences are constructed of wire mesh fence with a covering of burlap or some other suitable material on the upper grade side of the fence and anchored into the soil.

2.) The contractor shall be required to maintain the silt fence in a satisfactory condition for the duration of the project or until its removal is requested by the City Engineer. The silt accumulation at the fence may be left in place and seeded, removed, etc., as directed by the City Engineer. The silt fence becomes the property of the Contractor whenever the fence is removed.

3.05 MAINTENANCE:

A. The temporary erosion control features installed by the Contractor shall be acceptably maintained by the Contractor until no longer needed or permanent erosion control methods are installed. Any materials removed shall become the property of the Contractor.

B. In the event that temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of work as scheduled, and are ordered by the City Engineer, such as shall be performed by the Contractor at his own expense.